Queen's University
Library

KINGSTON, ONTARIO

James Fowler.
Queen's University.
1901.

CALENDAR

OF

Queen's College and University

KINGSTON, CANADA,

FOR THE YEAR 1901-1902.

PARTS I. and II.

INCORPORATED BY ROYAL CHARTER A. D. 1841.

KINGSTON:
PRINTED FOR THE UNIVERSITY BY THE BRITISH WHIG.
1901.

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1901/1902

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ACADEMIC YEAR.

1901.

May 15—Notice of intention to compete for Matriculation Scholarships to be given in writing to the Registrar.

July 4—Matriculation examinations begin at the University and every Collegiate Institute and High School in the Province.

Sept. 2—Notice of intention to appear at Supplemental Matriculation or Pass examinations to be given in writing to the Registrar.

" 17—Supplemental Pass examinations begin.

" 19—Supplemental Matriculation examinations begin.

" 30—Medical and Applied Science Matriculation examinations begin.

Oct. 2—Classes in Arts, Applied Science, Medicine and Mining open.

" 9—Holiday for Athletic games.

" 16—University Day.

" 22—Candidates for B.D., Supplemental and Matriculation examinations in Theology must give notice of their intention to appear.

" 29—B.D. Supplemental and Matriculation examinations in Theology begin.

Nov. 1—Classes in Theology open.

Dec. 21—Christmas holidays begin.

1902.

Jan. 7—Classes re-open.

" 11—Statutory Meeting of Senate.

Feb. 12—Holiday.

Mar. 20—Class work in Medicine closes, only for those presenting themselves for M.D., C.M.

" 21—Time expires for receiving Theses for Ph.D., D.Sc., and Essays for University Prizes.

" 22—Examinations in Medicine begin.

" 28—Holiday.

April 3—Class work in Arts, Applied Science and Mining closes.

" 5—Medical Convocation.

" 7—Examinations in Arts, Applied Science and Mining begin.

" 11—Class work in Theology closes.

" 16—Examinations in Theology begin.

" 28—Statutory Meeting of Senate for conferring Degrees, etc.

" 29—Summer Session in Medicine begins.

" 30—Convocation for distributing prizes, announcing Honours and laureating graduates in Arts, Science and Theology.

May 16—Class work in Medicine closes for those intending to take the license of the Ontario Medical Council.

June 22—Summer Session in Medicine closes.

UNIVERSITY OFFICERS.

BOARD OF TRUSTEES.

Retire April 1905.	H. A. Calvin, M.P.	Kingston.
Retire April 1904.	Rev. M. Macgillivray, M.A.	Kingston.
	Rev. John Mackie, M.A.	Kingston.
	Rev. M. W. Maclean, M.A.	Belleville.
	W. C. Caldwell, B.A., M.P.P.	Lanark.
	G. M. Macdonnell, B.A., K.C.	Kingston.
	Hugh Waddell	Peterboro.
	John McIntyre, M.A., K.C	Kingston.
	R. Vashon Rogers, LL.D., K.C.	Kingston.
Retire April 1903.	Michael Lavell, M.D., LL.D.	Kingston.
	Rev. W. T. Herridge, D.D.	Ottawa.
	Rev. D. R. Drummond, M.A.	St. Thomas.
	Rev. J. Edgar Hill, D.D.	Montreal.
	Sheriff MacLennan, B.A.	Lindsay.
	Sir Sandford Fleming, K.C.M.G., LL.D.	Ottawa.
	D. B. MacLennan, M.A., K.C.	Cornwall.
Retire April 1902.	P. C. McGregor, B.A.	Almonte.
	Rev. Thomas Wardrope, D.D	Guelph.
	Rev. Robert Campbell, M.A., D.D.	Montreal.
	Rev. James Barclay, M.A., D.D.	Montreal.
	And. T. Drummond, B.A., LL.D	Kingston.
	Hon. E. H. Bronson	Ottawa.
	Matthew Leggat	Hamilton.
	George Gillies, B.A.	Gananoque
Retire April 1901.	Rev. G. M. Milligan, B.A., D.D.	Toronto.
	Rev. Robert Campbell, D.Sc	Perth.
	Hon. Mr. Justice Maclennan, LL.D.	Toronto.
	Francis H. Chrysler, B.A.	Ottawa.
	J. Roberts Allan	Ottawa.
	E. W. Rathbun	Deseronto.
	Donald M. McIntyre, B.A.	Kingston.

Hon. Mr. Justice Maclennan, LL.D.....Chairman.

J. B. McIver, Esq., Kingston.....Secretary-Treasurer.

The Annual Meeting of the Board will be held in the Senate Chamber on the evening of Wednesday, April 30th.

UNIVERSITY COUNCIL.

The Council consists of the Chancellor, the Trustees, the members of the Senate, and an equal number of elective members.

The Chancellor is elected by the Council, except when two or more candidates are nominated, in which case the election is by registered graduates and alumni. He holds office for three years, and, as highest officer of the University, presides at meetings of the Council and Convocation, and at statutory meetings of Senate. In his absence he is represented by the Vice-Chancellor.

Of the elective members eight retire annually, except in every sixth year, when ten retire. Successors are elected by registered graduates and alumni. Retiring members may be re-elected.

The Council has power to elect five trustees (one trustee retiring annually); to discuss all questions relating to the College and its welfare; to make representations of its views to the Senate or the Board of trustees; to decide on proposals for affiliation and to arrange all matters pertaining to the installation of the Chancellor, to its own meetings and business, the meetings and proceedings of Convocation, and the fees for membership, registration and voting.

Convocation for the conferring of degrees, etc., will be held upon Wednesday, April 30th, 1902.

ELECTIVE MEMBERS IN THE ORDER OF THEIR RETIRING.

Retire 1906.	R. S. Minnes, M.A.	Ottawa.
	Rev. J. Hay, M.A., B.D.	Renfrew.
	P. C. McGregor, M.A.	Almonte.
	T. G. Marquis, B.A.	Brockville.
	Jas. Douglas, B.A., LL.D.	New York.
	E. Peacock, M.A.	Toronto.
	J. McD. Mowat, B.A.	Kingston.
	Judge McCallum, M.A.	Gore Bay.
Retire 1905.	Rev. J. J. Wright, B.A.	Regina, N.W.T.
	Rev. J. Cumberland, M.A.	Stella.
	Rev. J. D. Boyd, B.A.	Kingston.
	Gordon W. Mylks, M.D.	Kingston.
	R. K. Kilborn, M.D.	Kingston.
	J. Jones Bell, M.A.	Toronto.
	Eliza S. Fitzgerald, M.A.	Cornwall.
	Lennox Irving, B.A.	Pembroke.

Retire 1904.

JOHN MARSHALL, M.A.....Kingston.
W. A. LOGIE, M.A., LL.B.....Hamilton.
REV. JAMES CARMICHAEL, D.D....King.
JUDGE FRALECK, B.A.....Belleville.
R. H. COWLEY, M.A.....Ottawa.
REV. W. W. PECK, M.A., LL.B...Napanee.
R. S. O'LOUGHLIN, M.A.....New York.
J. R. LAVELL, B.A., M.P.....Smith's Falls.

Retire 1903.

W. F. NICKLE, B.A.....Kingston.
REV. N. MACPHERSON, M.A., B.D..Hamilton.
REV. T. J. THOMPSON, M.A., B.D..Belleville.
REV. D. STRACHAN, B.A.....Brockville.
J. J. MACLENNAN, B.A.....Toronto.
REV. R. LAIRD, M.A.....Brockville.
REV. JAS. BINNIE, M.A., B.D.....Macdonald's Corners.
REV. R. J. HUTCHEON, M.A.....Almonte.
C. MCDOWELL, B.A.....Renfrew.
FRANCIS KING, M.A.....Kingston.

Retire 1902.

R. V. ROGERS, B.A., LL.D.....Kingston.
H. A. CALVIN, M.P.....Kingston.
REV. D. MCTAVISH, D.Sc.....Toronto.
J. M. FARRELL, B.A.....Kingston.
REV. J. K. MACMORINE, M.A.....Kingston.
E. B. ECHLIN, B.A., M.D.....Ottawa.
GEORGE W. MITCHELL, M.A.....Cobourg.
REV. D. J. MCLEAN, B.A.....Arnprior.

Retire 1901.

REV. GEORGE MCARTHUR, B.A....Cardinal.
VINCENT H. MOORE, M.D.....Brockville.
GEO. BELL, B.A.....Toronto.
R. J. MCLENNAN, B.A.....Toronto.
REV. A. H. SCOTT, M.A.....Perth.
REV. F. G. KIRKPATRICK, B.A.....Wellington.
HERBERT M. MOWAT, B.A.....Toronto.
ALEXANDER G. FARRELL, B.A....Smith's Falls.

CHANCELLOR:

Sir Sandford Fleming C.E., K.C.M.G., LL.D.

PRINCIPAL AND VICE-CHANCELLOR:

Very Reverend George Monro Grant, M.A., D.D., LL.D.

VICE-PRINCIPAL:

.....

REGISTRAR:

George Y. Chown, B.A.

OFFICERS OF INSTRUCTION:

I.—In Theology.

The Principal.....Primarius Professor of Divinity.

Rev. D. Ross, D.D.....Professor of Apologetics and New Testament Criticism.

Rev. W. G. Jordan, B.A., D.D...Professor of Hebrew and Old Testament Criticism.

Rev. S. McComb, M.A. (Oxon)...Professor of Church History and History of Dogma.

Rev. John Thompson, D.D.....Lecturer on Pastoral Theology.

Rev. James Carruthers....."Watkins" Lecturer on Elocution.

II—In Arts.

Nathan F. Dupuis, M.A., F.B.S., Edin.....Professor of Mathematics.

Rev. George D. Ferguson, B.A...Professor of History.

John Watson, M.A., LL. D.....Professor of Moral Philosophy.

D. H. Marshall, M.A., F.R.S.E.Professor of Physics.

James Cappon, M.A.....,.....Professor of English Language and Literature.

John Macgillivray, Ph.D.(Leipsic)Professor of Modern Languages.

S. W. Dyde, M.A., D.Sc., LL.D., Professor of Mental Philosophy.

Rev. John Macnaughton, M.A...Professor of Greek.

Rev. Jas. Fowler, M.A.,F.R.S.C., "The John Roberts Allen" Professor of Botany.

Adam Shortt, M.A ....."The Sir John A. Macdonald" Professor of Political and Economic Science.

A. P. Knight, M.A., M.D....."The John Roberts" Professor of Animal Biology and Physiology.

T. R. Glover, M.A., (Cantab).....Professor of Latin.

W. G. Jordan, B.A., D.D.....Professor of Hebrew.

Rev. Alex. B. Nicholson, B.A....Assistant Professor of Latin and Greek and Lecturer on Comparative Philology and Sanscrit.

N. R. Carmichael, M.A....."The William Nickle" Tutor and Assistant to the Professor of Mathematics.

John Sharp, M.A.....Tutor in English and Philosophy

C. R. McInnis, M.A., Ph.D....." The Robert Waddell" Tutor of Physics.

III.—In Practical Science.

Nathan F. Dupuis, M.A., F.B.S., F.R.S.C .....Professor of Mathematics and Dean of Faculty.

D. H. Marshall, M.A., F.R.S.E., Professor of Physics.

Rev. Jas. Fowler, M.A., F.R.S.C.,Professor of Botany.

A. P. Knight, M.A., M.D.....Professor of Animal Biology and Physiology.

N. R. Carmichael, M.A.....Lecturer and Assistant to the Professor of Mathematics.

C. R. McInnis, M.A., Ph.D.....Demonstrator in Experimental Physics on "The Robert Waddell" Foundation.

For instructors in Chemistry, Assaying, Mineralogy, Metallurgy, Geology, Petrology, Engineering, Mechanicism, Electricity and Drawing, see Calendar of the School of Mining.

IV.—In Medicine.

Medicine.

Fife Fowler, M.D., L.R.C.S., Edin.....Emeritus Professor of the Principles and Practice of Medicine, Dean of the Faculty.

James Third, M.D.....Professor of Practice of Medicine.

John Herald, M.A., M.D.....Professor of Clinical Medicine and Dermatology, Secretary of the Faculty.

James W. Campbell, M.D.....Professor of Materia Medica and Therapeutics, Librarian.

Surgery.

Hon. Michael Sullivan, M.D.....Professor of the Principles and Practice of Surgery.

D. E. Mundell, B.A., M.D.....Assistant.

W. G. Anglin, M.D., M.R.C.S., F.O.S.....Professor of Clinical Surgery.

Anatomy.

Edward Ryan, B.A., M.D.....Professor of Systematic Anatomy.

D. E. Mundell, B.A., M.D.....Professor of Surgical Anatomy.

G. W. Mylks, M.D., and A. E. Ross, B A., M.D.....Demonstrators of Anatomy.

Obstetrics and Gynæcology.

M. Lavell, M.D., LL.D.....Emeritus Professor.

R. W. Garrett, M.A., M.D.....Professor.

Isaac Wood, M.A., M.D., M.R. C.S., Eng., F.O.S., Edin.....Assistant Professor and Lecturer in Pædiatrics.

Sanitary Science.

W. T. Connell, M.D., M.R.C.S., L.R.C.P.

A. R. B. Williamson, M.A., M.D., M.R.C.S., L.R.C.P.....Assistant.

Pathology and Bacteriology.

W. T. Connell, M.D., M.R.C.S., L.R.C.P.

Medical Jurisprudence.

W. T. Connell, M.D., M.R.C.S., L.R.C.P.

Opthalmology, Otology, Laryngology, and Rhinology.

J. C. Connell, M.A., M.D.

Mental Diseases.

C. K. Clarke, M.D.....Med. Supt. Hospital for the Insane.

Biology, Physiology and Histology.

James Fowler, M.A., F.R.S.C....Professor of Botany and Vegetable Histology.

A. P. Knight, M.A., M.D.....Professor of Animal Biology, Physiology and Histology.

T. T. Bower.....Tutor in Biology.

A. W. Richardson, B.A., M.D., Tutor in Histology.

Chemistry and Applied Chemistry.

W. L. Goodwin, B.Sc., (Lond.), D.Sc., Edin., Professor.

Isaac Wood, M.A., M.D., Tutor in Chemistry.

Examiners in Law.

Byron M. Britton, M.A., K.C.....Lecturer on Criminal Law.

R. Vashon Rogers, B.A., LL.D., Lecturer on Common Law.

G. M. Macdonnell, B.A., K.C.....Lecturer on the Law of Real Property.

R. T. Walkem, LL.D., K.C.....Lecturer on Equity.

John McIntyre, M.A., K.C.....Lecturer on Medical Jurisprudence.

OTHER OFFICERS.

Registrar of University Council.
J. C. Connell, M.A., M.D.

Observatory Board.
The Principal.

Director of Observatory.
Prof. Dupuis, M.A., F.B.S., Edin.

Curators of Library.
Professors Ross, Macnaughton, Knight and Shortt.

Librarian.
Lois Saunders.

Postmasters.
J. D. Byrnes, B.A., and W. McDonald, B.A.

Curators of Museum.
Professors of Botany and Geology.

Examiner in Medical Matriculation.
John Sharp, M.A.

Examiners in Gælic.
Professors Macgillivray and Macnaughton, and
Rev. M. Macgillivray M.A.

Janitor.
John V. Burton.

TIME TABLE—ARTS.

HOUR.	MONDAY.	TUESDAY.	WEDNESDAY.	THURSDAY.	FRIDAY.	SATURDAY.
8	*Moderns.	*Moderns. Sr. Hebrew.	*Moderns. Sr. Hebrew.	Jr. English. *Moderns.	*Moderns. Sr. Hebrew.	Assaying.
9	Jr. Greek. Jr. French. Jr. History. Jr. Philosophy. Animal Biology El. Mineralogy. *Philosophy. *Pol. Science.	Jr. Greek. Jr. French. Sr. History. Sr. Philosophy. Botany. Sr. Physics. *Philosophy. *Pol. Science.	Jr. Greek. Jr. French. Jr. History. Jr. Philosophy. An. Biology. *Philosophy. *Pol. Science.	Jr. Greek. Jr. French. Sr. History. Sr. Philosophy. Botany. Sr. Physics. *Philosophy. *Pol. Science.	Jr. Greek. Jr. History. Jr. Philosophy. Animal Biology *Philosophy. *Pol. Science.	Assaying.
10	Jr. Latin. Jr. Pol. Science. Jr. Physics. *Latin. *Italian. *History. *Philosophy. *Geology.	Jr. Latin. Sr. Pol. Science Sr. Mathemat. *Latin. *German. *Geology.	Jr. Latin. Jr. Pol. Science. Jr. Physics. Botany. *Latin. *Italian. *History. *Philosophy. *Mathematics. *Geology.	Jr. Latin. Sr. Pol. Science. Sr. Mathemat. *Latin. Biol. Labor'y. *History. *Geology.	Jr. Latin. Jr. Pol. Science. Jr. Physics. *Latin. Biol. Labor'y. *History. *French *Mathematics. *Geology.	Assaying.
11	Sr. Latin. Jr. Chemistry. Analyt. Chem. *Greek. *Mathematics. *Botany. *Geology.	Sr. Latin. Jr. German. Jr. Chemistry Analyt. Chem *Greek. *Mathematics. *Botany. *Geology.	Sr. Latin. Jr. German. Jr. Prac. Chem. Analyt. Chem. *Greek. *Botany. *Mineralogy. *Geology.	Sr. Latin. Jr. German. Sr. Chemistry. *Greek. *Mathematics. *Botany. *Geology.	Sr. Latin. Jr. German. Sr. Chemistry. *Greek. *Botany. *Geology.	Assaying.

12	Sr. Greek. Sr. French. *Philosophy. *An. Biology.	Sr. Greek. Sr. German. *Sanscrit. *Philosophy. *An. Biology.	Sr. Greek. Sr. French. *Sanscrit. *Philosophy. *An. Biology. *German.	Sr. Greek. Sr. German. *Philosophy. *An. Biology.	Sr. Greek. Sr. French. *Philosophy. *Philology. *An. Biology. *Astronomy.	Assaying.
2	Sr. English. *Mineralogy.	*English. Geology. *Physics. *Chemistry.	Sr English. *Chemistry.	Sr. English. Geology. *Mineralogy.	Mineralogy. Anglo Saxon.	
3	Jr. Mathemat. *English. *Physics. *Chemistry. Jr. Hebrew.	Jr. English. *Physics. *Chemistry.	Jr. Mathemat. *English. *Physics. *Chemistry. Jr. Hebrew.	Jr. English. *Mathematics. *Physics. *Chemistry.	Jr. Mathemat. *Physics. *Chemistry. Jr. Hebrew.	
4	*Mathematics.	*Mathematics.	*Mathematics.			

*Denotes Honours.

TIME TABLE—THEOLOGY.

HOUR.	MONDAY.	TUESDAY.	WEDNESDAY.	THURSDAY.	FRIDAY.	
8		*Ch. History.	Sr. Hebrew.	*Ch. History.	Sr. Hebrew.	
9		*O. T. Criticism		*O.T. Criticism		
10	N. T. Criticism	O. T. Critcism.	History of Dogma.	O. T. Criticism.	N. T. Criticism	
11	Ch. History.	Divinity.	Divinity.	Ch. History.	Ch. History.	
12	Discourses.	Apologetics.	Apologetics.	Apologetics.	English Bible.	
3	Jr. Hebrew.		Jr. Hebrew.		Jr. Hebrew.	

*Denotes Honours.

TIME TABLE—PRACTICAL SCIENCE.

First Year.

	VIII.	IX.	X.	XI.	XII.	I.	II.	III.	IV.
Mon.	*1. Elem. Cryst.	1. Elem. Min.	Jr. Physics.	Jr. Chemistry.	App. Math.		Jr. Chemistry (Practical)	Jr. Math.	‡Surveying.
Tues.	*1. Elem. Cryst. Drawing.	Drawing.	Drawing.	Jr. Chemistry.		Workshop.	Workshop.	Jr. English.	‡Surveying.
Wed.	*1. Elem. Cryst. Workshop.	Workshop.	Jr. Physics.	App. Math.		Workshop.	Workshop.	Jr. Math.	‡Surveying.
Thurs.	Jr English.	Drawing.	Drawing.	Drawing.		Workshop.	Workshop.	Jr. English.	‡Surveying.
Friday.	†Surveying. *1. Elem. Cryst.	†Surveying.	Jr. Physics,	†Descript. Astronomy. ‡Elem. Trigonom.		Workshop.	1. Blow Piping.	Jr. Math.	‡Surveying.
Sat.	Qualita 1. Elemen	tiveAnalysis—2nd tary Mineralogy	Term. Excursion	s—1st Term.			Drawing.	Drawing	Drawing.

*Course of about 15 lectures at opening of first term. ‡First term only. †Second term only.

TIME TABLE—PRACTICAL SCIENCE.

SECOND YEAR.

	VIII.	IX.	X.	XI.	XII.	II.	III.	IV.	V.
MON.	†Surveying.	†Surveying.	Drawing.	Drawing.		Syst. Min.			‡Surveying.
TUES.		Sr. Physics.	Sr. Math.	Qual. and Quan. Analysis.	Materials of Construction.	Geology.	General Engineering	Qual. and Quant. Analysis.	
WED.	App. Math.	Qual. and Quant. Analysis.	Qual. and Quant. Analysis.	2. Syst. Min.		Workshop.	Workshop.	Workshop.	
THURS.	App. Math.	Sr. Physics.	Sr. Math.	Sr. Chemistry.	Materials of Construtoin.	Geology.	Co-ord. Geom. Qual. and Quant. Analysis.	Qual. and Quant. Analysis.	‡Surveying.
FRIDAY.	Drawing.	Drawing.	Drawing.	Sr. Chemistry.		Workshop.	Workshop	Workshop.	
SAT.	Qual. and Quant. } Geological	Analysis Excursions	during October and November.						

‡ First term only. † Second term only.

TIME TABLE—PRACTICAL SCIENCE.

Third Year.

	VIII.	IX.	X.	XI.	XII.	II.	III.	IV.	V.
Mon.	3. Descrip. Min.		Geology.	Syn. Sol. Geom. Metallurgy.		Structural Engineering	Technical Chemistry.	Ore Dressing. Modern Geometry.	
Tues.	†Surveying.	Thermo-dymanics.	Geology.	Mining.		App. Math.	Electrical Engineering	Ore Dressing.	
Wed.	3. Deter. Min.	3. Deter. Min.	Geology.	Metallurgy.		Structural Engineering	Physical Chemistry.	Spher. Trig. and Astronomy.	
Thurs.	3. Deter. Min.	Thermo-dynamics.	Geology.	Elementary Calculus.			Co-ord. Geom.	Elem. Electr. Engineering	
Friday.	Deter. Min.	App. Math.	Geology.	Electrical Engineering Mining.		Structural Engineering	† Physical Chemistry.	†Technical Chemistry.	
Sat.	3. Assaying	—2nd term Geological	Excursion	s will be ma	de durin	g Oct. and	Nov.		

†Second term.

TIME TABLE—PRACTICAL SCIENCE.

FOURTH YEAR.

	VIII.	IX.	X.	XI.	XII.	II.	III.	IV.	V.
MON.		‡Mechanical Engineering	Elec. Engineering. Mining.				Metallurgy.	¡Hydraulics.	
TUES.			Mining.				Metallurgy.	†Mining Law.	
WED.		Mechanism	Thermo-dynamics. Mining Project.	Mining Project.	Mining Project.			†Mining Law.	
THURS.	Milling.	Milling.	Milling.	Milling.	Milling.	Milling.	Milling.	Milling.	Milling.
FRIDAY.		‡Mechanical Engineering	Mining Project.	Mining Project.	Mining Project.				
SAT.									

‡First term. †Second term.

JUNIOR AND SENIOR MATRICULATION EXAMINATIONS.

SEPTEMBER, 1901.

		9 A.M	2 P.M.
Thursday,	19th Sept.	—English Composit'n.	Eng. Literature.
Friday,	20th "	—History.	Euclid.
Saturday,	21st "	—Latin Authors.	Latin Gram. and Comp.
Monday,	23rd "	—Physics.	
Tuesday,	24th "	—Arithmetic.	Algebra.
Wednesday,	25th "	—French Authors.	French Grammar & Composition.
Thursday,	26th "	—Greek Authors.	Greek Grammar & Composition.
		German Authors.	German Grammar & Composition.
Friday,	27th "	—Botany.	Animal Biology.
Saturday,	28th "	—Chemistry.	English Grammar.

PASS SUPPLEMENTAL EXAMINATIONS.

SEPTEMBER, 1901.

		9 A.M.	2 P.M.
Tuesday,	17th Sept.	—Jr. Philosophy.	Sr. Philosophy.
Wednesday,	18th "	—Jr. Pol. Science.	Sr. Pol. Science.
Thursday,	19th "	—Jr. English.	Sr. English.
Friday,	20th "	—Jr. History.	Sr. History.
Saturday,	21st "	—Jr. Latin.	Sr. Latin.
Monday,	23rd "	—Jr. Physics.	Sr. Physics.
Tuesday,	24th "	—Jr. Mathematics.	Sr. Mathematics.
Wednesday,	25th "	—Mineralogy.	Geology.
		Jr. French.	Sr. French.
Thursday,	26th "	—Jr. Greek.	Sr. Greek.
		Jr. German.	Sr. German.
Friday,	27th "	—Botany.	Animal Biology.
Saturday.	28th "	—Jr. Chemistry.	Sr. Chemistry.

PASS EXAMINATIONS.

APRIL, 1902.

ARTS.

		9 A.M.	2 P.M.
Monday,	7th April.	—Jr. French.	Sr. French.
Tuesday,	8th "	—Jr. Greek.	Sr. Greek.
Wednesday,	9th "	—Jr. English.	
Thursday,	10th "	—Sr. English.	
Friday,	11th "	—Jr. Pol. Science.	Sr. Pol. Science.
Saturday,	12th "	—Jr. Mathematics.	
Monday,	14th "	—Sr. Mathematics.	
Tuesday,	15th "	—Jr. Latin.	Sr. Latin.
Wednesday,	16th "	—Jr. Philosophy.	Sr. Philosophy.
Thursday,	17th "	—Jr. Physics.	Sr. Physics.
Friday,	18th "	—Jr. Chemistry.	Sr. Chemistry.
Saturday,	19th "	—Geology.	Mineralogy.
Monday,	21st "	—Jr. German.	Sr. German.
Tuesday,	22nd "	—Jr. History.	Sr. History.
Wednesday,	23rd "	—Botany.	Animal Biology.

THEOLOGY.

Wednesday,	16th April.	—Church Hist. and Hist. of Dogma.
Thursday,	17th "	—Senior Hebrew.
Friday,	18th "	—Old and New Testament Criticism.
Saturday,	19th "	—Divinity.
Monday,	21st "	—Junior Hebrew.
Tuesday,	22nd "	—Apologetics.
Wednesday,	23rd "	—Sr. O. T. Criticism.

Three hours allowed for each paper.

Time table for Honour Examinations will be issued in March.

GENERAL ANNOUNCEMENTS.

QUEEN'S COLLEGE has under its Royal Charter, "the style and privileges of a University."

The Sixty-first Session will open on Wednesday, the 2nd of October, 1901.

☞ A compilation of statutes and by-laws containing information for students is published separately. Copies are to be obtained from the Registrar.

BOARDING.—Lists of boarding houses may be obtained from the Registrar.

REGISTRATION.—All students are required to have their names entered in the University Register. Before Registration they must pay the required fees, or produce the Treasurer's receipt for them. They must also present a certificate of character from their clergyman or other competent person, and sign a declaration promising due obedience to the University authorities.

ATTENDANCE AT CHURCH.—All students are expected to attend the churches to which they profess to belong, and produce certificates of attendance from their clergyman when required.

THE LIBRARY contains about 37,000 volumes. Students are entitled to the use of it subject to by-laws.

THE OBSERVATORY.—The Astronomical Observatory, which was founded in 1858, by the joint assistance of the City Corporation and private subscribers, was transferred to the University in 1861.

The building contains a transit room, an equatorial room and working room.

The instruments are a Beaufoy transit loaned by the Royal Astronomical Society, an equatorial by Alvan Clark & Sons, a small transit by Troughton & Simms, a sidereal clock by Fauth & Co., a mean-time clock, and several smaller instruments.

Time is supplied to the city and mathematical and engineering students are taught how to make and reduce the more commonly occuring astronomical observations.

Courses of lectures given upon Descriptive Astronomy and on Practical Astronomy, in alternate years, are open to the citizens of Kingston.

The Museum.—The geological collections, embracing rocks, minerals and fossils, contain the following :

1. The Bell collections, illustrating a north and south stratigraphical section across the Province from Lake Erie, 1,000 specimens. Section across the Ottawa river, 500.

2. Specimens of rocks and minerals from various sources, 3,600.

3. Specimens of fosssils, 5,000. The rocks and minerals contributed and collected during late years are deposited in the collections of the School of Mining.

4. The Botanical collection contains 1,200 genera, 3,650 species, and 9,450 sheets of mounted plants. The private herbarium in the museum contains 2,157 genera, 8,654 species, and 14,731 sheets. These include large collections of Tasmanian, Australian, South African, European, and Asiatic species. The flora of the British Islands is almost completely represented.

5. The zoological collection contains: Mammals, 26; birds, 130; fishes, 40 ; invertebrates, about 200 in alcohol and 150 dry ; a small collection of reptiles, and another of insects ; the mollusca are represented by about 2,600 shells. A large addition has been recently made to the herbarium.

Academic Costume.—All graduates and undergraduates when attending class or any college meeting, shall wear the costume prescribed by the University.

Each degree has its distinctive hood, as follows: B.A., black bordered with red silk; M.A., scarlet; B.Sc., black silk bordered with yellow silk; D.Sc., black silk, lined with blue silk, bordered with white; M.D., scarlet, bordered with white; B.D., white bordered with crimson plush; D.D., black silk, lined with white silk; LL.B., blue, bordered with white fur; LL.D., black silk, lined with blue silk; Ph.D., black silk, lined with purple, bordered with white.

FEES.—Graduation and spring examination fees must be paid before March 29th; supplemental examation fees before September 1st; all other fees on or before October 10th.

FEES: (1) FACULTY OF ARTS.

Senior Matriculation Examination		$ 10 00
Senior Matriculation on *pro tanto* certificate		10 00
Junior Matriculation Examination at University		5 00
Extra-mural Junior Matriculation Examination (September)		8 00
Registration	per session	10 00
Class Fees	"	25 00
*Pass Examination	"	8 00
Honour Examination	"	10 00
Any Class except those mentioned below	"	8 00
Junior Chemistry	"	12 00
Senior Chemistry	"	12 00

SPECIAL FEES.

Laboratory—Element'y Mineralogy & Blowpiping	per session	5 00
" Honour Qualitative Analysis	"	20 00
" Honour Quantitative Analysis	"	20 00
" Physics, Pass Course	"	2 00
" Physics, Honour	"	10 00
" †Botany, Honour Course	"	3 00
" Botany, Pass Course	"	1 00
" Animal Biology, Honour Course	"	12 00
" Animal Biology, Pass Course	"	3 00
" Petrography	"	5 00
" Assaying	"	5 00
Matriculation Certificate		5 00
Certificate of standing		1 00
Graduation—Bachelor of Arts (B.A)		10 00
" Master af Arts (M.A)		20 00
" Doctor of Philosophy (Ph.D)		50 00
" Doctor of Science (D.Sc)		50 00
Admisssion ad eundem gradum (B.A)		20 00
" " statum		10 00

Students taking Chemistry, Geology or Mineralogy must register in the School of Mining, pay the fee of $1.00 and make a deposit of $5.00.

†Students collecting 200 specimens for their own use will be exempt from this fee.

*Students who have paid the examination fee in April can write on the September Examinations on payment of $4.00.

FEES: (2) FACULTY OF PRACTICAL SCIENCE.

Matriculation Examination (September)		$ 5 00
Registration	per session	10 00
Registration Mining School	"	1 00
Class Fees—1st Year	"	46 00
" 2nd Year	"	46 00
" 3rd Year	"	51 00
" 4th Year	"	56 00
*Pass Examination	"	8 00

FOR STUDENTS NOT PAYING CLASS FEES AS ABOVE.

Any Class except those specificed below	per session	$ 8 00
Junior Chemistry	"	12 00
Senior Chemistry	"	12 00
Practical Trigonometry and Descriptive Astronomy	"	10 00
Elementary Drawing	"	9 00
" Surveying	"	10 00
Qualitative Analysis	"	20 00
Study of Mathematical Instruments	"	8 00
Practical Surveying	"	10 00
Mechanical and Engineering Laboratory	"	20 00
Experimental Study of Electricity and Magnetism	"	10 00
Laboratory—Element'y Mineralogy and Blowpiping	"	5 00
" Honour Qualitative Analysis	"	20 00
" Honour Quantitative	"	20 00
" Honour Practical Physics	"	10 00
" Pass Practical Physics	"	2 00
" Animal Biology, Honour Course	"	12 00
" Animal Biology, Pass Course	"	3 00
" Petrography	"	5 00
" Assaying	"	5 00
Certificate of Standing		1 00
Graduation—B. Sc		20 00
" M. E		20 00
Admission ad eundem statum		10 00

Students registered in Practical Science taking classes in the Mining School must make a deposit of $5.00 with the Treasurer of the Mining School.

*Students who have paid the examination fee in April can write on the September examination on payment of $4.00.

Fees: (3) Faculty of Medicine.

Matriculation Examination (October 1st)	$5 00

The Sessional Fee, including Classes, Registration, Athletics, Library, Examination, Laboratories, and the required amo nt of dissection material is $100 per session. If paid before October 31st, $90. If paid before January 10th, $95. Special arrangements will be made as to fees with those who do not take the full course of any year.

Special Fees.

Fee for Summer Session	$20 00
Special Course on Eye, Ear and Throat	6 00
Admission ad eundem statum	10 00
Graduation—M.M., C M	30 00

For further information on this Faculty, apply to Dr. Herald, the Secretary.

Fees: (4) Faculty of Theology.

Matriculation		$ 2 00
Registration	per sesson	5 00
Pass Examination	"	3 00
Supplemental Pass Examination	"	3 00
*B.D. Examination	"	6 00

Special Fees.

Testamur	$ 2 00
Graduation—Bachelor of Divinity	20 00
Admission ad eundem statum	10 00

Fees: (5) Faculty of Law.

Registration	per session	$10 00
Examination	"	10 00

Special Fees.

Graduation Bachelor of Laws (L.L.B.)	$20 00
Admission ad eundem gradum	20 00
Admission ad eundem statum	10 00

(6) Mining.

For information on these courses, apply to Dr. W. L. Goodwin, Director, School of Mining.

(7) Agriculture.

For information apply to J. W. Hart, Superintendent of Dairy School.

*Students who have paid the examination fee in April can write on the September examinations on payment of $3.00.

FACULTY OF ARTS.

ARTICLE I.—PASS MATRICULATION.

GENERAL REGULATIONS.

1. The classes in the University are open to unmatriculated students, but candidates for a degree must pass the matriculation examination before being admitted to examination on the University courses.

2. Any person presenting a Departmental certificate of matriculation will be admitted as an undergraduate upon paying the registration fee. Any person will be exempt from any part of the Matriculation Examination already passed.

3. Any person presenting a Junior Leaving certificate will be permitted to enter upon a University course in Arts, but his first examination must include any two of Junior Latin, Greek, French or German.

4. The examination in July will be that conducted for the Universities by the Education Department, known as the Departmental Matriculation examination. The examination will be held at Queen's University and at the various Collegiate Institutes and High Schools of Ontario. Candidates for this examination, if they propose to write at a Collegiate Institute or High School, must notify the Public School Inspector of their city or county, and pay him the fee before May 23rd, and at the same time send notice to the University Registrar on a form which will be supplied on application. Candidates

proposing to write at Queen's University must send the required notice to the Registrar by May 23rd, accompanied by the fee.

5. A second examination will begin at Queen's University on September 17th, 1900. Notice of intention to appear at this examination, together with the fee, must be sent to the Registrar by September 2nd, on a form which will be supplied on application. A Candidate failing partially in July and desiring to complete the examination in September, and who did not write at Queen's University, must send a copy of the marks obtained in the July examination, certified by the head-master of the school at which he wrote.

6. The fees for Junior Matriculation are:—Part I., $2.00; Part II., $5.00; Part I. and II., taken at the same time, $5.00.

7. All candidates for Junior Matriculation shall take English, Latin, History, Mathematics, and any two of Greek, French, German, Experimental Science (Physics and Chemistry).

8. The examination is divided into Parts I. and II., which may be taken together or at different times. Part I. includes Arithmetic, English Grammar, and the History of Great Britain and Canada. Part II. includes Latin, English Composition, English Literature, Ancient History, Algebra, Geometry, and any two of Greek, French, German, and Chemistry. Physics of either Form II. or III. of the High School course must be taken with either Part I. or Part II. by candidates who select Experimental Science.

9. The percentage for Pass is thirty-three and one-third on each paper. The marks for sight work on each

of the "Authors" papers shall not constitute more than thirty-three and one-third per cent. of the whole of the marks for the paper.

10. Junior Leaving certificates will be accepted *pro tanto* at both Part I. and Part II. of the Junior matriculation examination.

11. Matriculation scholarships will be awarded on the results of the July Departmental Matriculation examination. (See article on Matriculation Scholarships.)

12. Candidates for scholarships must notify the Registrar not later than May 23rd, stating distinctly where they intend to write, and declaring their intention to enter, if successful, on a course of study in Queen's University.

SUBJECTS OF JUNIOR MATRICULATION, 1901-1902.

PART I.

English Grammar and Rhetoric.

The main facts in the development of the language. Etymology and Syntax, including the inflection, classification, and elementary analysis of words and the logical structure of the sentence.

One examination paper.

Arithmetic.

Arithmetic.—Elementary Rules; Fractions (Vulgar and Decimal), Interest, Discount and easy problems in Stocks.

One examination paper.

History of Great Britain and Canada.

Great Britian and Canada from 1763 to 1885, with the outlines of the preceding periods of British History.

The Geography relating to the period prescribed.

One examination paper.

Physics.

Use of metre rule; use of calipers and vernier for more accurate metric measurements (*e.g.*, diameters of wires, thickness of glass, plates, etc.,); numerical calculation in the metric system.

Use of balance.

Specific gravity, by specific gravity bottle and hydrostatic balance, of liquids and of solids.

Boyle's law; barometer, diffuston of gasses.

Use of Fahrenheit and Centigrade thermometers; determination of zero and boiling point dependent on pressure.

Expansion of solids, liquids and gasses; examples.

Specific heat; latent heat; easy numerical examples.

Transmutation of matter; indestructibility of matter.

Solution, precipitation, crystallization and evaporation.

One examination paper.

PART II.

Greek.

Translation into English of passages from prescribed texts.

Translation at sight (with the aid of vocabularies) of easy Attic prose, to which special importance will be attached.

Grammatical questions on the passages from prescribed texts will be set, and such other questions as arise naturally from the context.

Translation from English into Greek of sentences and of easy narrative passages based upon the prescribed prose texts,

1901 { Selections from Zeonophon, Anabasis I, in White's Beginner's Greek Book (pp. 304-428) with the exercises thereon; Homer, Iliad I.

1902: Selections from Xenophon, Anabasis I, in White's Beginner's Greek Book (pp. 304-428) with the exercises thereon; Homer, Iliad VI.

Two papers will be set: (1) Prescribed texts and translations at sight, questions on grammar; (2) the translation of English into Greek.

Latin.

Translation into Latin of English phrases and easy sentences to illustrate Latin accidence and the common rules of Latin syntax.

Translation into Latin of easy narrative English based upon the first twenty-five chapters of the prescribed Cæsar.

Translation at sight (with the aid of vocabularies) from some easy prose author.

Translation from prescribed texts, with grammatical and other questions naturally arising from the extracts set for translation.

The following are texts prescribed:—

1901: Virgil, Æneid, Bk. II; Cæsar, Bellum Gallicum, Bks. II. III.

1902: Cornelius Nepos, Lives of Themistocles, Aristides and Hannibal; Cæsar, Bellum Gallicum, Bk. IV. (omitting chap. 17) and Bk. 5., chaps. 1-23; Virgil, Æneid, Bk. II. (1-505.)

Two papers will be set: (1) Translation of English into Latin. (2) Prescribed texts and translation at sight, with questions and Grammar, etc.

Mathematics.

Algebra.—Elementary Rules, Highest Common Measure, Lowest Common Multiple, Fractions, Square Root, Simple Equations, of one two and three unknown Quantities, Indices, Surds, Quadratics of one and two unknown Quantities.

One examination paper.

Geometry.—Euclid: I, II and III; Easy Deductions.

One examination paper.

French.

The candidate's knowledge of French will be tested by: (1) simple questions on Grammar, (2) the translation of simple passages from English into French, (3) translation at sight of easy passages from modern French, and (4) an examination on the following texts:

1901: De Maistre, Voyage autour de ma chambre; Labiche, la Grammaire.

1902: Lamennais, Paroles d'un croyant, Chaps. VII. and XVII.; Perrault, le Maitre Chat ou le Chat Botté; Dumas, un nez gelé, and la Pipe de Jean Bart; Alphonse Daudet, la Dernière classe, and la Chèvre de M. Seguin; Legouvé, la patte de dindon; Pouvillon, Hortibus; Loti Chagrin d'un vieux forçat; Molière, l'Avare, Acte III., sc. 5 (Est-ce à votre cocher . . . . sous le mienne); Victor Hugo, Waterloo, Chap. IX.; Rouget de L'Isle, la Marseillaise; Arnault, la Feuille; Chateaubriand, l'Exilé; Théophile Gautier, la Chimère; Victor Hugo, Extase; Lamartine, l'Automne De Musset, Tristesse; Sully Prudhomme, le Vase brisé; La Fontaine, le Chêne at le Roseau.

Madame Emile de Girardin, la Joie fait peur.

Two papers will be set: (1) Prescribed texts and translation at sight; questions on Grammar; (2) the translation of English into French.

German.

The candidate's knowledge of German will be tested by; (1) simple questions on Grammar, (2) the translation of simple passagns from English into German, (3) translation at sight of easy passages from modern German, and (4) an examination on the following texts:—

1901: Leander, Traumereien (selected by Van Daell.)

1902: Grimm, Rotkäppchen; Andersen, Wiés der Alte macht, Das neue Kleid, Venedig, Rothschild Der Bär; Ertl, Himmelsschlüssel; Frommel, Das eiserne Kreuz, Baumbach, Nicotiana, Der Goldbaum; Heine, Lorelei, Du Bist wie eine Blume; Uhland, Shäfer's Sonntagslied, Das Schloss am Meer; Chamisso, Das Schloss Boncourt; Claudius, Die Sterne, Der Riese Goliath; Gœthe, Mignon, Erlkönig, Der Sänger; Schiller, Der Jungling am Bache.

Leander, Träumereien, (selected by Van Daell) pp. 1-44.

Two papers will be set: (1) Prescribed texts and translations at sight; questions on Grammar; (2) the translation of English into German.

English.

Composition.—An essay, to which special importance will be attached on one of seven themes set by the examiners. In order to pass in this subject, legible writing, correct spelling and punctuation. and proper construction of sentences are indispensable. The candidates should also give attention to the structure of the whole essay, the effective ordering of thought, and the accurate employment of a good English vocabulary. About two pages of foolscap is suggested as the proper length for the essay; but quality, not quantity, will be mainly regarded.

One examination paper.

Literature.—Such questions only shall be set as may serve to test the candidates familiarity with, and intelligent and appreciative comprehension of, the prescribed texts. The candidate will be expected to have memorized some of the finest passages. In addition to questions on the following selections, others shall be set on a "sight passage" to test the candidates ability to interpret literature for himself.

One examination paper.

1901.

Tennyson: Elaine, Lady of Shalott, St. Agnes' Eve., Sir Galahad, Lotus Eaters, Ulysses, Crossing the Bar, Early Spring, "You Ask me why," "Of old sat Freedom," "Love Thou Thy Land," the six interlude songs and "Tears, Idle Tears," in The Princess.

1902.

Scott: Lay of the Last Minstrel.

ANCIENT HISTORY.

1. General outlines of Greek History to the battle of Chæronea, 338 B.C., as contained in the *Fyffe's History of Greece* (Primer).

General outlines of Roman History to the death of Augustus, as contained in *Creighton's History of Rome* (Primer).

Geography relating to the History prescribed.

One examination paper.

CHEMISTRY.

Properties of Hydrogen, Chlorine, Oxygen, Sulphur, Nitrogen, Carbon and their more important compounds. Nomenclature, Laws of combination of the elements. The Atomic Theory and Molecular Theory.

One examination paper.

ARTICLE II.—SENIOR MATRICULATION.

1. Candidates who intend to pursue an Honour Course in the University are recommended to take the Senior matriculation (Form IV.) in as many subjects as possible.

2. Candidates for Senior matriculation shall take English, Latin, History, Mathematics, and any two of Greek, French, German, Experimental Sciences (Physics and Chemistry).

3. The percentage for Pass is thirty-three and one-third on each paper. The marks for sight work on each of the "Authors" papers shall not constitute more than thirty-three and one-third per cent. of the whole of the marks for the paper.

*4. Candidates who have taken forty per cent. on the Senior matriculation or Senior Leaving papers in Latin, Greek, French, German, Mathematics, English, Chemistry, Physics, or Biology, will, on payment of the Senior Matriculation *pro tanto* fee, not be required to take the University Junior class in the subject; be exempt from the Junior class not exceeding five in these subjects.

5. Any person presenting a Senior Leaving certificate with Science option will be permitted to enter upon a University course, but in his first examination, must pass either Junior Latin, Greek or Moderns.

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*NOTE.—Candidates intending to avail themselves of this clause should write the Deputy Minister of Education, stating where and when they wrote, and have their marks forwarded to the Registrar, who will advise the classes allowed.

SUBJECTS OF SENIOR MATRICULATION.

Greek.

Translation into English of passages from prescribed texts.

Translation at sight of passages of average difficulty, similar to the authors read.

Grammatical questions on the passages from prescribed texts will be set, and such other questions as arise naturally from the context.

Translation into Greek of ordinary narrative passages of English.

The following are the prescribed texts :—

1901 : Xenophon, Anabasis I, ch. i-viii ; Homer, Iliad I ; Odyssey XV ; Lucien, Charon (Heitland), and Vera Historia II (Jerram).

1902 : Xenophon, Anabasis I, ch. i-viii ; Homer, Iliad VI ; Odyssey XVII ; Lucien, Charon (Heitland), and Vera Historia II (Jerram).

Two examination papers.

Latin.

Translation into English of passages from prescribed texts.

Translation at sight of passages of average difficulty, similar in style to the authors read.

Grammatical questions on the passages from prescribed texts will be set, and such other questions as arise naturally from the context.

Translation into Latin of ordinary narrative passages of English.

1901 : Cæsar, Bellum Gallicum, bks. II, III ; Virgil Ænid, bk. II ; Horace, Odes I, II ; Livy XXI.

1902 : Cæsar, Bellum Gallicum, bks. IV, omitting chap. 17, and bk. V chaps. 1-23 ; Virgil, Ænid II, lines 1-505 ; Horace, Odes I, II ; Cicero, Pro Lege Manilia, Pro Marcello, Philippic XIV (Harper's text).

Two examination papers.

Mathematics.

Algebra.—Elementary Rules ; Highest Common Measure ; Lowest Common Multiple ; Fractions ; Square Root ; Simple Equations of one two and three unknown Quantites ; Indices ; Surds ; Quadratics of one and two unknown quantities ; Theory of Divisors ; Ratio Proportion and Variation ; Progressions ; Notation ; Permutations and Combinations ; Binomial ; Theorem Interest Forms, Annuities.

One examination paper.

Geometry—Euclid, Books I, II, III, IV and VI ; Definitions of Book V ; Deductions.

One examination paper.

Trigonometry.—Trigonometrical ratios with their relations to each other; Sines, etc., of the sum and difference of angles with deduced formulas; use of Logarithms; solution of Triangles; expressions for the area of a Triangle; Radii of circumscribed, inscribed, and escribed circles.

One examination paper.

Problems—One paper.

French.

The prescription of work in Grammar, Composition, and Sight Translation is the same for Senior as for Junior, but the examination will be of a more advanced character.

The following are the prescribed texts:—

1901: De Maistre, Voyage autour de ma chambre; Labiche, la Grammaire; Erckmann-Chatrian, Madame Thérèse; Labiche, la Poudre aux yeux.

1902: Lamennais, Paroles, d'un croyant, Chaps. VII and XVII; Perrault, le Maître Chat ou le Chat Botté; Dumas, Un nez gelé, and la Pipe de Jean Bart; Alphonse Daudet, la Dernière classe and la Chèvre de M. Seguin; Legouvé la Patte de dindon; Pouvillon, Hortibus; Loti, Chagrin d'un vieux forçat; Molière, l'Avare, Acte III, sc 5 (Est-ce à votre cocher . . . . sous la mienne); Victor Hugo, Waterloo, Chap. IX; Rouget de L'Isle, la Marseillaise; Arnault la Feulle; Chateaubriand, l'Exilé; Théophile Gautier, la Chimère; Victor Hugo; Extase; Lamartine; l'Automne; De Musset, Tristesse; Sully Prudhomme, le Vase brisé; La Fontaine, le Chêne et le Roseau.

Madame Emile De Girardin, la Joie fait peur.

Mèrimée, Colomba.

Two examination papers.

German.

The prescription of work in Grammar, Composition, and Sight Translation is the same for Senior as for Junior, but the examination will be of a more advanced character.

The following are the prescribed texts:—

1901: Leander, Träumereien (selected by Van Daell); Baumbach, der Schwiegersohn; Gerstäcker, Germelshausen; Elz, Er ist nicht eifersüchtig; Wichert, Post Festum.

1902: Grimm, Rotkäppchen; Andersen, Wie's der Alte macht, Das neue Kleid, Venedig, Rothschild, Der Bär; Ertl, Himmelsschlüssel; Frommel, Das eiserne Kreuz; Baumbach, Nicotiana, Der Goldbaum; Heine, Lorelei, Du bist wie eine Blume; Uhland Schäfer's Sonntagslied, Das Schloss am Meer; Chamisso, Das Schloss Boncourt; Claudius, Die Sterne, Der Riese Goliath; Goethe, Mignon, Erlkönig, Der Sänger;

Schiller, Der Jüneling am Bache. Leander, Träumereien (selected by Van Daell), pp. 1-44. Ebner-Eschenbach, Die Freiherren von Gemperlein ; Wilhelmi ; Einer muss heiraten. Benedix, Eigensinn.

Two examination papers.

ENGLISH.

Composition.—An essay, to which special importance will be attached, on one of several themes set by the examiners.

One examination paper.

Literature.—The candidate will be expected to have memorized some of the finest passages. Besides questions to test the candidate's familiarity with, and comprehension of, the following selections, questions may also be set to determine within reasonable limits his power of appreciating literary art.

Rhetoric.—Reading of prose authors in connection with the study of Rhetoric.

One examination paper.

1901.

Tennyson.—Elaine, Lady of Shalott, St. Agnes' Eve, Sir Galahad, Lotos-Eaters, Ulysses, Crossing the Bar, Early Spring, "You Ask Me Why," "Of Old Sat Freedom," "Love Thou Thy Land," the six interlude songs and "Tears, Idle Tears," in the Princess.

Milton.—Paradise Lost, Book VII.
Shakespeare --Julius Cæsar.

1902.

Scott.—Lay of the Last Minstrel
Milton.—Paradise Lost, Book I.
Shakespeare.—The merchant of Venice.

HISTORY.

English History from the discovery of America to 1763.

General outlines of Greek History to the battle of Chaeronea, 338 B.C. Special attention to be paid to the following : General characteristics of Greece and the Greeks ; ancient institutions ; constitution of Athens and Sparta ; Persian Wars ; growth of the Athenian Empire ; characteristics of the age of Pericles ; Peloponnesian Wars ; rise of Thebes ; Theban supremacy ; rise of Macedon ; downfall of Greece.

General outlines of Roman History to the death of Augustus. Special attention to be given to the following : General characteristics of Italy and the Roman people ; struggle of the Plebeians for political and social equality ; conquest of Italy ; Punic Wars ; how Rome governed and was governed ; internal and external History of Rome from the downfall of Carthage to the death of Augustus.

The Geography relating to the History prescribed.

One examination paper.

Physics.

Mechanics.—Measurement of velocity; uniformly accelerated rectilineal motion; metric units of force, work, energy and power; equilibrium of forces acting at a point; triangle, parallelogram, and polygon of forces; parallel forces; principles of moments; centre of gravity; laws of friction; numerical examples.

Hydrostatics.—Fluid pressure at a point; pressure on a horizontal plane; pressure on an incline plane; resultant vertical pressure, and resultant horizontal pressure, when fluid is under air pressure and when not; transmission of pressure; Bramah's press; equilibrium of liquids of unequal density in a bent tube; the barometer; air-pump; water-pump, common and force; siphon.

Electricity.—Voltaic cells, common kinds; chemical action in the cell; magnetic effects of the current; chemical effects of the current; voltametres; electroplating; astatic and tangent galvanometers; simple notions of potential; Ohm's law; shunts; measurement of resistance; electric light, arc and incandescent; current induction; induction coil, dynamo and motor; the joule and watt; electric bell; telegraph; telephone; elements of terrestrial magnetism.

One examination paper.

Chemistry.

Chemical Theory.—The study of the following elements, with their most characteristic compounds, in illustration of Mendelejeff's Classification of the Elements; Hydrogen; Sodium, Potassium; Magnesium, Zinc; Calcium, Strontium, Barium; Boron, Aluminium; Carbon, Silicon, Tin, Lead; Nitrogen, Phosphorus, Arsenic, Antimony, Bismuth; Oxygen, Sulphur; Fluorine, Chlorine, Bromine, Iodine; Manganese, Iron. Elementary Qualitative Analysis.

A practical examination shall be held in connection with this subject, a pure salt will be sent out for qualitative analysis, and the candidate shall be allowed the use of an analytical table.

One examination paper.

Biology.

1. *Elements of Zoology.*—Thorough examination of the external form, the gills and the viscera of some common fish. Study of the prepared skeleton of the same. Demonstration of the arrangement of the muscular and nervous systems and the sense organs, as far as these can be studied without the aid of a microscope.

Comparison of the structure of the frog with that of a fish. The skeleton of the pectoral and pelvic girdles, and of the appendages of the frog, should be studied and the chief facts in the development of its spawn observed, till the adult form is attained.

Examination of the external form of a turtle and a snake.

Examination of the structure of a pigeon or a fowl.

Study of the skeleton, and also of the teeth and viscera of a cat or dog.

Study of a crayfish as a type of the Arthropods.

Comparison of the crawfish with an insect (grasshopper, cricket or cockroach); also with a millipede and a spider.

Examination of an earthworm.

Study of a fresh water mussel.

The principles of zoological nomenclature as illustrated by some of the common fresh water fish, such as the sucker and herring, bass and perch.

Study of an amœba or paramœcium as a type of a unicellular animal.

The modification of the form of the body in vertebrates in connection with the different methods of locomotion.

2. *Elements of Botany.*—The examination will test whether the candidate has practically studied representatives of the flowering plants of the locality in which the preparatory school is situated, and representatives of the chief sub-divisions of cryptogams, such as a fern, a lycopod, a horsetail, a liverwort, a moss, a lichen, a mushroom, and a chara.

An elementary knowledge of the microscopic structure of the bean and the maize. Attention will be given in the examination to drawing and description of parts of plants supplied, and to the classification of these. Comparison of different organs, morphology of root, stem, leaves, and hair, parts of the flower, reproduction of flowering plants, pollination, fertilization, and the nature of fruit and seeds

A practical examination shall be held in connection with this subject. The material for examination will consist of two plants, a microscopic section and an animal.

Two examination papers.

ARTICLE III.—ARTS MATRICULATION SCHOLARSHIPS, 1901.

A Scholarship cannot be held without attendance on the University classes. To be eligible for free tuition in the remaining sessions of his course the scholar must pass his annual examination to the satisfaction of the Senate. To hold a Scholarship a candidate must be fully matriculated.*

I.—The following Scholarships, of the values specified, are awarded on the July Departmental Senior Matriculation (Form IV.) examinations.

Candidates for Senior Matriculation Scholarships must take Honours in the department or departments specified in connection with the Scholarship.

Name and Source of Money.	*Free Tuition.*	*Total Value.*	*Subject.*
1. PRINCE OF WALES. $60, Founded by H.R.H. the Prince of Wales	$100	$160	Mathematics Chemistry and Physics.
2. GOVERNOR-GENERAL. $75. Given by His Excellency the Earl of Minto, LL.D.	100	175	Classics.
3. CHANCELLOR. $100. Founded by Sir Sandford Fleming, K.C.M.G., Chancellor	100	200	Mathematics.
4. WILLIAMSON No. 1. $65. Founded in memory of the late Vice-Principal Rev. Dr. James Williamson.	100	165	Classics and English.
5. WILLIAMSON No. 2. $60. Founded in memory of the late Vice-Principal, Rev. Dr. James Williamson	100	160	Classics and French or German.
6. LEITCH MEMORIAL No. 1. $60. Founded in memory of the late Principal Leitch	100	160	French, German, Chemistry and Physics or Botany.

	Name and Source of Money.	Free Tuition.	Total Value.	Subjects.
7.	NICHOLLS FOUNDATION No. 1. $50. Founded by the late Charlotte Nicholls, of Peterboro.....	$100	$150	English, French and German.
8.	MAYOR. $50. Given by the Mayor of Kingston ..	100	150	Latin, French and German.
9.	MOWAT. $50. Founded by the late John Mowat, Esq , Kingston.	100	150	Mathematics.
10.	FORBES MCHARDY. $25. Founded by the late Forbes McHardy, Esq., Toronto	100	125	Mathem., French and German.
11.	MEMBER'S. $25. Given by B. M. Britton, K.C., M.P., for Kingston.	100	125	English, French and German.

II.—The following Scholarships, of the values specified, are awarded on the July Departmental Junior Matriculation (Form III.) examinations for proficiency in the subjects indicated :

	Name and Source of Money.	Free Tuition.	Total Value.	Subject.
1.	NICHOLL'S FOUNDATION No. 2. $30. Founded by the late Charlotte Nicholls, Peterboro	$100	$130	General proficiency Part II. Junior Matriculation.
2.	KINGSTON. $25. Given by the Hon. Wm. Harty, M.P.P. for Kingston.....	100	125	Do.
3.	NICHOLL'S FOUNDATION No. 3. $20. Founded by the late Charlotte Nicholls, Peterboro	100	120	Do.

III.—The following Scholarships have been endowed under special conditions:

Name and Source of Money.	*Free Tuition.*	*Total Value.*	*Subject.*
1. WATKINS. $60. Founded by the late John Watkins, Esq., Kingston	$100	$160	Given to the student of the Kingston Collegiate Institute who stands highest in the Senior Matriculation examination.
2. MCLENNAN GLENGARRY FOUNDATION. $75 a year for four years. Founded by R. R. McLennan, M.P., Alexandria	100	400	General Proficiency. Given only to cadidates of one of the High Schools of the County of Glengarry.
3, 4, 5. Same as No. 2			
6. MARION STEWART MCDONALD. $75. Founded by John S. McDonald, Esq., Fond du Lac, Wis		75	General Proficiency. Given only to candidates from the County of Glengarry.

Notice of intention to compete for Scholarships must be sent to the Registrar before May 23rd, 1901, on a form which will be supplied on application.

*Candidates who wish to present certificates for any part of Part I. or Part II. Matriculation will forward them with the notice.

ART. IV.—UNIVERSITY PRIZES, MEDALS AND SCHOLARSHIPS.

SPECIAL SCHOLARSHIPS.

EXHIBITION OF 1851, SCIENCE RESEARCH SCHOLARSHIP.

This scholarship of the annual value of £150 stg. is awarded by Her Majesty's Commissioners for the Exhibition of 1851 to students who have given evidence of capacity for original research, and (except in very special circumstances) are under 30 years of age.

The nominee must be a British subject, must have been a *bona fide* student of this University for three years, must have been a student of this University for a full year immediately before his nomination, must be a student of this University at the time of his nomination, (or he must have been a student at this University for a full year ending within twelve months prior to his nomination and since ceasing to be such student must have been engaged solely in scientific study) and must pledge himself not to hold any position of emolument whilst holding the scholarship. He is recommended to the Commissioners by the Senate of the University. The scholarship may be held for a second year, if the report of the first year's work be satisfactory to the Commissioners The scholar will in the absence of special circumstances, be required to proceed to an institution other than that by which he is nominated, and there pursue some investigation likely to promote techical industries or scientific culture. The particular investigation the student proposes to pursue must be stated before a scholarship can be awarded.

The next recommendation will be made by the Senate in April, 1901.
Science Research Scholars recommended by Queen's University :—
Norman R. Carmichael, M.A., 1894-5.
Thomas L. Walker, M.A., 1896-7.
Frederick J. Pope, M.A., 1898-9.
Wm. C. Baker, M.A., 1900.

PRIZES.

These are prizes in money for literary articles, essays, etc., as specified under each particular prize, and are open to students of the present or preceding session.

CONDITIONS OF COMPETITION.—1. Competitive papers must be given to the Registrar not later than the 21st of March.

2. Each paper is to bear a motto, instead of the author's name, and must have attached to it a sealed envelope, bearing the same motto and containing a written declaration over the author's signature, to the effect that it is his unaided composition.

3. The envelope attached to successful papers shall be opened and the writer's name made known at the Convocation at the close of the session.

4 The best productions must be reported by the examiners to be of sufficient merit.

5. All successful productions shall be the property of the University, and be at the disposal of the Senate.

A.—LEWIS.

Value $25. Given for the best lecture on Matt. XX, 1-16.

B.—GOWAN FOUNDATION NO. I.

Value $25. Given by the Honourable Senator Gowan, C.M.G., LL.D., for the best essay on "The Bounty System as a means of developing Industries in Canada."

C.—GOWAN FOUNDATION NO. II

Value $25. Given by the Honourable Senator Gowan, C.M.G., LL.D., for "The best collection of Canadian Plants." The collection must be delivered before 15th December.

D.—GOWAN FOUNDATION NO. III.

Value $25 in Books. Given by Honourable Senator Gowan, C.M.G., LL.D. Given in Honours in Political Science.

E.—LATIN AND GREEK COMPOSITION.

Two prizes, each of the value of $10 in books, are offered for competition for the best composition in Latin and Greek prose respectively. Subjects for composition, 1901-1902: Latin prose, Boissier, *Cicero and his friends* p. 232, "Trebatius left Rome reluctantly," to p. 234 "one more charm to his wit." Greek prose, Grote's History of Greece, Chap. XLIX, beginning with, "On returning from the expedition against the Peloponnesus," ending "as something belonging to him by acquired right."

F.—SPECIAL FRENCH AND GERMAN PRIZES.

Two prizes, each of the value of $10 in books, are offered for the best Examination in April in Senior French and Senior German respectively.

SCHOLARSHIPS IN ARTS AND PRACTICAL SCIENCE.

1.—THE CHANCELLOR'S PRACTICAL SCIENCE SCHOLARSHIP.

Value $70. Given by Sir Sandford Fleming, C.E., K.C.M.G., LL.D., Chancellor of the University. Awarded to the Practical Science student passing the best examination at the end of first year.

2.—SCHOLARSHIP IN CHEMISTRY.

Value $50. Given by a graduate in Chemistry. Awarded annually to the student of any faculty who makes the best marks on an examination set, in April, upon the curriculum of the Senior Chemistry class. Candidates may have previously taken First Honour Chemistry. The holder of this Scholarship must proceed with the course in Honour Chemistry.

3.—THE M. C. CAMERON SCHOLARSHIP IN GAELIC.

Value $30. Founded by the late M. C. Cameron, M.P., Goderich. Awarded to the best Gaelic scholor, reader and speaker. The examination takes place after the September Matriculation examination. Work prescribed: Ossian's Fingal, Duncan Ban MacIntyre's Poems, Blackie's Language and Literature of the Scottish Highlands. Translation at sight of Gaelic into English and English into Gaelic. This Scholarship will not be awarded to any candidate who does not take at least 50 per cent. of the total number of marks in the examination.

4.—THE HIRAM CALVIN SCHOLARSHIP IN LATIN.

Value $25. Given by Hiram Calvin, M.P., Kingston, to encourage the study of Latin in the University. Tenable for two years. Awarded in alternate years on the result of the April examinations in Senior Latin, to the best student who is proceeding to the Honour Course in Latin. Not to be held by any student unless in actual attendance, nor with another Scholarship. Not necessarily to be awarded, unless a certain degree of merit is shown by the best available candidate.

MEDALS.

University medals will be awarded to the candidates who obtain the highest number of marks in the Honour courses leading to the degree of M.A.

Candidates for medals will be required at the final examination to take all the Honour papers in the work of the courses which they select. No medal will be awarded to any candidate who fails to obtain three-fourths of the whole number of marks.

SCHOLARSHIPS IN THEOLOGY.

I.—MATRICULATION SCHOLARSHIPS.

1.—DAVID STRATHERN DOW.

Founded in 1866 by David Strathern Dow, Esq., Whitby, Ont. Value $75.

2.—BUCHAN NO. 1.

Founded in 1875, by the late Rev. Alexander Buchan, Stirling, Ontario. Value $65.

3.—BUCHAN NO. 2.

Founded by the late Rev. A. Buchan. Value $55.

4.—DOMINION.

Founded in 1870 by the late Walter Lawson, Scotland, Value $70.

5.—BUCHAN NO. 3.

Founded by the late Rev. A. Buchan. Value $45.

6.—M'INTYRE.

Founded in 1876, by Mrs. Margaret W. McIntyre, Perth, Ontario. Value $20.

II.—SCHOLARSHIPS AWARDED AT CLOSE OF SESSION.

1.—SARAH M'CLELLAND WADDELL MEMORIAL.

Founded in 1899, by Hugh Waddell, Esq., South Monaghan, Ont., in memory of his mother, Sarah McClelland. Value $120. Awarded upon the Sessional Examination at the close of the first year in Divinity, Old and New Testament Exegesis, Church History and Elocution.

2.—THE CHANCELLOR'S.

Given by Sir Sandford Fleming, C.E., K.C.M.G., LL.D., value $70. Awarded to the student of the second year, who, while standing well in at least two classes in Theology, has in the opinion of the Faculty, taken the highest position during the year in Honour work in Arts.

3.—SPENCE.

Founded in 1879, by the late Rev. Alex. Spence, D.D., formerly minister of St. Andrew's Church, Ottawa. Value $60. Awarded upon the Sessional Examination at the close of the first year in Divinity, Old and New Testament Exegesis and Apologetics or Hebrew. Tenable during second or third year in Theology.

4.—LEITCH MEMORIAL NO. 2.

Founded in 1867, in memory of the late Principal Leitch, by subscribers in Scotland and Canada. Value $80. Awarded upon a Sessional Examination, and tenable during three successive years, should the successful candidate, after the completion of his Theological curriculum at this University, continue his studies at this or any European University. Candidates must have the degree of B.A. The next competition will take place in 1901. Subjects of examination: The Epistles to the Romans and Hebrews in Greek, Psalms I-XXV in Hebrew, Butler's Analogy and the Divinity Lectures of the session.

5.—ANDERSON NO. 1.

Founded by the late Robert Anderson, Esq., Montreal. Value $40. Awarded in first year Divinity.

6.—ANDERSON NO. 2.

Founded by the late Robert Anderson, Esq. Value $35. Awarded in second year divinity.

7.—TORONTO.

Founded by the Ladies' Association of St. Andrew's Church, Toronto. Value $60. Awarded in second year Hebrew.

8.—ST. ANDREW'S CHURCH, TORONTO.

Given by the Session of St. Andrew's Church, Toronto. Value $50. Awarded in Old and New Testament Exegesis.

9.—RANKINE.

Founded in 1881 by the late Alexander Rankine, Esq., Leamington, England. Value $55. Awarded in Apologetics.

10.—GLASS MEMORIAL.

Founded in memory of the late Henry Glass, Esq., of Sarnia, by his widow. Value $30. Awarded in Church History.

11.—MACKIE.

Given by the Rev. John Mackie, M.A., St. Andrew's Church, Kingston, to the student who passes the best examination on The Early Apologists. Value $25 in books. May be taken by a student holding another scholarship.

12.—JAMES ANDERSON BURSARY.

Founded by the late James Anderson, Acton, Ont. Value $25. Awarded by the Senate to a student who can preach in Gaelic.

13.—WILLIAM MORRIS BURSARY.

Founded by the late Hon. Alexander Morris, in memory of his father. Value $50. Awarded by the Senate to a Divinity student taking a post-graduate course in the University.

PRIZES AND SCHOLARSHIPS IN MEDICINE.

PRIZES.

1. At the end of the second session :

Two demonstrators and four prosectors in Anatomy will be chosen by the Professor of Anatomy and the Lecturer on Practical Anatomy.

A prize of $25 will be awarded to the student making the highest number of marks on this year's examination in Anatomy, Physiology and Materia Medica.

2. At the end of the third session :

Some standard work on Medicine (value $10.00), presented by Dr. Geo. Hayunga, of New York, will be awarded to the student making the highest percentage of marks on the year's examination in Materia Medica, Therapeutics and Pharmacy.

3. At the end of the fourth session :

THE CHANCELLOR'S SCHOLARSHIP.

Given by Sir Sandford Fleming, C.E., K.C.M.G., LL.D. Value $70. Awarded to the student taking the highest percentage at all the examinations of the fourth year.

This scholarship is open only to students who take the examinations of the Ontario Medical Council and is tenable only on condition that the winner pursues the studies of the fifth year at Queen's as prescribed in the Calendar, or studies in Europe.

Candidates for this Scholarship must hand in their names to the Registrar before the examinations begin.

The student receiving this cannot hold it with the position of House Surgeon, but he may elect which he will hold.

MEDALS.

Two medals will be awarded as follows :

1. One medal to the final year student passing the best examination upon the following subjects :—Practice of Medicine, Clinical Medicine, Pathology, Bacteriology, Sanitary Science and Jurisprudence.

2. One medal to be awarded to the final year student passing the best examination upon the following subjects :—Surgery, Clinical Surgery, Obstetrics and Gynaecology, Medical and Surgical Anatomy.

HOUSE SURGEONS.

Three House Surgeons will be appointed at the Kingston General Hospital, for twelve months each, from among the students taking the highest stand in the examinations of the year. Candidates for these appointments must have passed all previous examinations. These appointments must be approved by the Board of Governors of the Kingston General Hospital.

ARTICLE V.—ONTARIO TEACHERS' CERTIFICATES.

1. Teachers' Certificates which are of sufficiently recent date will be accepted *pro tanto*.

2. Under the regulations issued previous to August 1899, Second Form, Primary, Public School Leaving, or Part I. Junior Leaving certificates will be accepted as the equivalent of Part I. Matriculation, and Second Class and Part II. Junior Leaving Certificates for Part II. Junior Matriculation, so far as the subjects correspond.

3. Under circular No. 50, issued by the Department in August, 1899, Part I. Junior Leaving Certificates for Part I. Junior Matriculation. Candidates with Science option can enter under conditions of that clause.

4. Any person presenting a Junior Leaving Certificate will be permitted to enter upon a University course, but in his first examination must include any two of Junior Latin, Greek, French or German.

5. First Class, Senior Leaving, or Form IV. Certificates will be accepted for Senior Matriculation, so far as they cover the subjects of Matriculation.

6. Any person presenting a Senior Leaving Certificate with Science option will be permitted to enter upon a University course, but with his first examination he must include either Junior Latin, Greek or Moderns.

*7. Any person presenting a Senior Leaving Certificate, having made at least forty per cent. in Latin, Greek, French, German, Mathematics, English, Chemistry, Physics or Biology, will, on payment of the Senior Matriculation fee, not be required to take the Junior class in the subject.

ARTICLE VI.—EXTRA MURAL STUDENT.

1. The Senate may, for special reasons, allow extra-mural students to enter upon the work of the Pass or Honour courses, and to present themselves for examination without attendance upon classes ; but candidates for a degree must, before being registered, pass the Matriculation, or an examination accepted by the Senate as equivalent.

2. Extra-mural students must register and pay the registration fee of $10 and the tutorial fees, if any, before University Day, (Oct. 16th). The Registrar will then send them class and tutorial cards in the subjects upon which they propose to be examined in the following April or September. These cards must be forwarded at once to the Professors of the respective classes.

3. Extra-mural students must write the essays and exercises prescribed and send them to the Professors or Tutors of the subjects at the date specified. For information regarding essays and exercises, and the fees to be paid to the Registrar for assistance by Tutors appointed by the Professors and acting under their supervision, see the sections concerning extra-mural students in "Subjects of Study for B.A. and M.A."

*NOTE.—Candidates intending to avail themselves of this clause should write the Deputy Minister of Education, stating when and where they wrote, and have their marks forwarded to the Registrar, who will advise them the classes allowed.

4. An examination may be held, on application from candidates who have complied with the above regulations, in any centre at which the Senate has appointed a presiding examiner or to which the University sends an examiner. In all cases the examination fee must be paid in advance by the candidates, and in addition a fee of $2.00 for each local half-day examination.

5. Students must make application to the Registrar, at least three weeks before the beginning of the University examinations in April and September, for the papers on the particular subjects, as laid down in the Calendar, on which they propose to write.

6 Extra-mural students, taking only French, German, Botany or Animal Biology, may register on payment of $5.

7. Oral examinations in Final Honour Moderns and practical examinations in Science must be taken at the University.

ARTICLE VII.—PERCENTAGE REQUIRED.

To take Pass standing, 40 per cent.

To take Third Class Honours, 50 per cent.

To take Second Class Honours, 66 per cent.

To take First Class Honours, 75 per cent.

ARTICLE VIII.—PASS COURSES LEADING TO DEGREE OF B. A.

1. The course after Matriculation extends over four sessions. But students who take at least 40 per cent. in the Senior Matriculation or Senior Leaving examinations in at least four of Latin, Greek, French, German, English, Mathematics, Physics, Chemistry or Biology may complete their course in three years.

2. Pass and Honour examinations are held annually in April, and Pass examinations in September also.

3. The Degree of B.A. will be conferred on candidates who take—

(*a*) Pass standing in the Pass classes and second or third Class Honours in the Honour classes of any of the Honour courses, or

(*b*) Pass standing in the Pass classes and at least third class Honours in the Honour classes in either of the following Pass courses :

COURSE I.

A.—Junior and Senior Latin.
Junior and Senior Greek or Moderns.†
Junior and Senior English.
Junior and Senior Philosophy.
Junior History or Junior Political Science.
Junior Mathematics.

B.—Any two of Junior Physics, Junior Chemistry, Botany, Animal Biology, Mineralogy, Geology, Junior Hebrew.

C.—Any two of the following :

(1) Any two not taken under A of Junior History, Senior History, Junior Political Science, Senior Political Science.
(2) Junior and Senior French.†
(3) Junior and Senior German.†
(4) Senior Hebrew.
(5) Any two of Senior Mathematics, Senior Physics, Senior Chemistry, and the classes not taken in B.
(6) Any other two of those in (5) or B.
(7) Preliminary Honours (at least third class) in either Latin, Greek, Moderns, History, Philosophy, Political Science, Physics, Botany, Animal Biology, Chemistry, Mineralogy, or Geology.
(8) Preliminary Honours (at least third class) in any other in (7).
(9) Intermediate Honours (at least third class) in English.
(10) Honours in Mathematics as specified under Honour Mathematics.
(11) Final Honours (at least second class) in any class in (7), (9), or (10).

COURSE II.

A.—Junior Latin.
Junior Greek or Moderns.
Junior and Senior English.
Junior and Senior Philosophy.
Junior and Senior Mathematics.
Junior Physics.
Junior Chemistry.

† Only for those who have not yet taken them.

B.—Any two of Botany, Animal Biology, Mineralogy, Geology.

C.—Any three of the following:

(1) Senior Latin.
(2) Senior Greek or Moderns.
(3) Junior or Senior History.
(4) Junior and Senior Political Science.
(5) Junior Hebrew.
(6) Senior Physics and Senior Chemistry.
(7) Any other two of those in (B).
(8) Preliminary Honours (at least third class) in either Latin, Greek, Moderns, History, Philosophy, Political Science, Physics, Botany, Animal Biology, Chemistry, Mineralogy, or Geology.
(9) Preliminary Honours (at least third class) in any other in (8).
(10) Preliminary Honours (at least third class) in any other in (8).
(11) Intermediate Honours (at least third class) in English.
(12) Honours in Mathematics as specified under Honour Mathematics.
(13) Final Honours (at least second class) in any class in (8), (11), or (12).

NOTE.—Senior French will be accepted instead of Junior German, and Senior German instead of Junior French.

4. No student is allowed to take a Senior class before passing the Junior in the same subject.

5. No student is allowed to attend or pass more than five classes in any one year. A sixth class may be added if it be a subject in which he has already failed.

6. Students should take the classes in English, Classics, French, German and Mathematics in the first two years of their course.

ARTICLE IX.—HONOUR COURSES.

1. *Students preparing for the position of High School Masters are recommended to take one of the courses that qualify for Specialists' Certificates under the Departmental Regulations.*

2. The Degree of M.A. will be conferred on students who take Pass standing in the Pass classes, and first class Honours in the Honour classes, in any one of the following courses.

3. The Degree of B.A. will be conferred on candidates who take Pass standing in the Pass classes, and second or third class Honours in the Honour classes of any one of the following courses:

4.—Course A.—Literature and Philosophy.

PASS CLASSES.

Junior Latin,
Junior Greek,
Junior French,
Junior German. } Any three.

Junior English,
Senior English,
Junior Philosopy. } Three.

Junior Mathematics,
Animal Biology. } One.

Senior Latin,
Senior Greek,
Senior Moderns,
Senior Philosophy,
Junior and Senior Political Science,
Junior and Senior History. } Any three.

HONOUR CLASSES.

Preliminary and Final Honour Latin,
" " " Greek,
" " " Moderns,
Preliminary Intermediate and Final Honour English,
Preliminary and Final Honour History,
" " " Political Science,
" " " Mental Philosophy,
" " " Moral Philosophy. } Any two.

5.—Course B.—Mathematics and Physics.

PASS CLASSES.

Junior and Senior English,
" " Mathematics,
" " Physics,
Junior Philosophy. } Seven.

Junior History,
Junior Political Science,
Senior Philosophy,
Junior Chemistry. } Any one.

PASS CLASSES—(*Continued*).

Junior Latin,
Senior Latin,
Junior Greek,
Senior Greek,
Junior French,
Senior French,
Junior German,
Senior German.
} Any two.

One of the following Honour Groups:

1. Mathematics—Comprising Honour Mathematics, Preliminary Honour Physics and Practical Astronomy.

2. Physics—Comprising Preliminary and Final Honour Physics, subjects 1, 2, 3, 4, 5, 6, 7, of Honour Mathematics, and Descriptive Astronomy,

6.—COURSE C—SCIENCE.

PASS CLASSES.

Junior English,
Senior English,
Junior Mathematics,
Senior Mathematics,
Junior Philosophy,
Junior Physics,
Senior Physics,
Junior Chemistry,
Senior Chemistry,
} Nine.

Junior Latin,
Senior Latin,
Junior Greek,
Senior Greek,
Junior French,
Senior French,
Junior German,
Senior German,
Senior Philosophy.
} Any two.

One of the following Honour Groups:

1. Preliminary and Final Honour Chemistry and Preliminary and Final Honour Experimental Physics.

2. Preliminary and Final Honour Chemistry, with either Preliminary and Final Botany or Preliminary and Final Honour Animal Biology.

3. Preliminary and Final Honour Chemistry, Preliminary and Final Honour Geology, Preliminary and Final Honour Mineralogy.—Any two.

Specialists' Courses.

7. By agreement with the Education Department, candidates taking either the M.A. or B.A. Degree under any one of the following Honour Courses will receive the non-professional qualification of Specialist.

8. The Degree of M.A. will be conferred on Students who take Pass standing in the Pass classes and first class Honours in the Honour classes in any one of the following courses.

9. The Degree of B.A. will be conferred on candidates who take Pass standing in the Pass classes and second or third class Honours in the Honour classes of any one of the following courses:

10.—Course I.—Classics.

Pass Classes.

	Calendar Page.
Junior and Senior Latin	59, 60
Junior and Senior Greek	62
Junior and Senior English	67, 68
Junior and Senior Philosophy	77
Junior Mathematics	84
Junior History (Greek and Roman)	60, 62

Honour Classes.

Honour Latin, Preliminary and Final	61
Honour Greek, " "	63

11.—Course II.—English and History.

Pass Classes.

Junior and Senior Latin	59, 60
Junior and Senior Greek	62
Junior and Senior English	67, 68
Junior Philosophy	77
Junior Mathematics	84
Junior History (Modern)	72
Junior History (Greek and Roman)	60, 62
Senior History	72

Honour Classes.

Honour English, Preliminary, Intermediate and Final	69, 70
Honour History, Preliminary	74
Honour Latin, Preliminary	61
Honour Greek, Preliminary	63

12.—Course III.—Moderns (English, French and German) and History.

Pass Classes.

	Calendar Page.
Junior and Senior Latin	59, 60
Junior and Senior Moderns	64
Junior and Senior English	67, 68
Junior Philosophy	77
Junior Mathematics	84
Junior and Senior History (Honour percentage required).	72

Honour Classes.

Honour English, Preliminary Intermediate and Final	69, 70
Honour German, Preliminary and Final	64, 65
Honour French, Preliminary and Final	66

13.—Course IV.—Mathematics.

Pass Classes.

Junior Latin	59
Junior Greek or Moderns	62, 64
Junior and Senior English	67, 68
Junior Philosophy	77
Junior and Senior Physics	86
Junior Mathematics	84

Honour Classes.

Preliminary Honour Physics, with Practical Astronomy	88
Honour Mathematics	84, 85

14,—Course V.—Mathematics and Physics.

Pass Classes.

Junior Latin	59
Junior Greek or Moderns	62, 64
Junior and Senior English	67, 68
Junior Philosophy	77
Junior and Senior Physics	86
Junior and Senior Mathematics	84

Honour Classes.

Preliminary Honour Physics, with Descriptive Astronomy	88
Final Honour Physics	88
Honour Mathematics: No. 1, 2. 3, 4, 5, 6, 7	84

15.—Course 6.—Science.

Pass Classes.

Junior Latin	59
Junior French, German, or Greek	62, 64

	Calendar Page.
Junior and Senior English	67, 68
Junior and Senior Mathematics	84
Junior and Senior Physics (Laboratory Practice in both)	86
Junior and Senior Chemistry	93
Botany	89
Animal Biology	90
Mineralogy	96
Geology	100

Honour Classes.

Preliminary Honour Chemistry	94
Preliminary Honour Botany	89
Preliminary Honour Animal Biology	92

Together with any one of the following groups :

(*a*). Final Honour Botany and Final Honour Animal Biology.
(*b*). Experimental Honour Physics and Final Honour Chemistry.
(*c*). Final Honour Chemistry and Preliminary and Final Honour Mineralogy.
(*d*). And Preliminary Honour Mineralogy and Preliminary and Final Honour Geology.

16. Students intending to teach in Ontario are referred to the Calendar of the Ontario Normal College for information regarding Professional Examinations.

17. By a regulation of the Education Department, any person who has spent two years as a registered student in post-graduate work at Queen's, may write at the final examination of the Ontario Normal College without attendance.

ART. X. SUBJECT OF STUDY FOR B.A. AND M.A.

LATIN.

PROFESSOR.—T. R. Glover, M.A. (Cambridge).

ASST.-PROFESSOR—Rev. A. B. Nicholson, B.A.

TUTORS—U. Macalister, M.A., J. F. McDonald, M.A.

JUNIOR CLASS.

Latin Grammar (Allen & Greenough).

Latin Composition: (*a*) Sentences to illustrate Latin Syntax; (*b*) Translation into Latin of simple continous English (Text book: Fletcher & Henderson's *Latin Prose Composition.*)

Translation of simple Latin at sight.
Livy, XXI.
Horace, *Odes I, II.*
Virgil, *Æneid II.*

Extra-mural students are charged a fee of $3 for the examination of the exercises which they must do during the session. Lecture cards to be sent to the Rev. A. B. Nicholson.

SENIOR CLASS.

Latin Grammar.
Latin Composition.
Translation of Latin at sight.
Cicero, *Letters* 1 *to* 40 *in Tyrrell's Selection* (Macmillan).
Virgil, *Æneid X, XI, XII,* (Papillon, Sidgwick, Page, Conington).
Sallust *Catiline*, (Summers, Cambridge Press).
Bendall and Lawrence: Graduated passages for first-sight translation, Part I, Easy. (Cambrige Press).
Conington's translation of the *Æneid* into English verse is recommended.

HONOURS.

Candidates for Preliminary and Final Honours in Latin should note that special stress is laid on Composition and Unseen Translation. Passages will also be set for translitaon from the books specified below. The Roman History required from candidates for Specialist certificates is included in the Preliminary Honour examination and must also be taken.

Students will find help in the following books:

G. Boissier: *Cicero and his Friends: The Country of Horace and Virgil.*
W. W. Capes: *University Life in Ancient Athens.*
D. Comparetti: *Virgil in the Middle Ages.*
J. W. Mackail: *Latin Literature.*
F. W. H. Myers: *Essays Classical.*
H. Nettleship: *Studies in Latin Literature.*
Sainte-Beuve: *Essai Sur Virgile.*
R. Y. Tyrrell: *Introductory Essavs to Cicero's Letters*, (vols. I-VI.)

They will find advantage in using the Latin Dictionary of Lewis and Short, and if an English-Latin Dictionary is also required, that of Dr. Wm. Smith is recommended. Instead of the editions mentioned below, students may find it convenient to use the Teubner series.

Preliminary (1901-02).

(This class must be taken at least one year before the Final examinations. It may also be taken as a Pass Class).

Virgil, *Æneid* (Conington).
Horace, *Epistles and Odes*.
Cicero, *Philippic* I. (Mayor).
Letters (vol. I. Tyrrell, Dublin University Press).
Tacitus, *Annals* I, II, (Furneaux).
Histories IV, V.
Catullus, *Selection*.
Lucan, *Pharsalia* VII. (Postgate).
Persius (Conington).

Final (1901-02).

Virgil, (Conington).
Horace, (Wilkins, Palmer).
Cicero, *Philippic* II (Mayor).
Pro Murena (Heitland).
Divinatio in Caecilium (Heitland).
Letters (vol. I, Tyrrell, Dublin University Press).
Tacitus, *Annals* I-VI, (Furneux).
Histories IV, V.
Livy I, XXII.
Juvenal, *The* 13 *Satires* (Mayor, J. D. Duff).
Plautus *Trinummus* (Gray).
Persius (Conington).
Catullus, *Selection* (Ellis, Teubner).
Lucretius V, (Munro, Duff).
Lucan, *Pharsalia* VII (Haskins, Postgate).

Final (1902-03).

Virgil.
Horace.
Cicero, *Pro Rabirio* (Heitland).
Pro Murena (Heitland).
De Natura Deorum II (J. B. Mayor).
Letters (vol. I, Tyrrell, Dublin University Press).
Tacitus, *Annals* I-VI.
Histories IV, V.
Catullus, *Selection* (Ellis, Teubner).
Juvenal, *The* 13 *Satires* (Mayor, J. D. Duff).
Livy I, XXII, (Seeley, Capes).
Lucretius V, (Munro, Duff).
Persius, (Conington).
Plautus, *Miles Gloriosus* (Tyrrell).

Pliny, *Correspondence with Trajan* (Hardy).
Propertius, *Selection* (Postgate).
Quintilian X, (Peterson).

Extra-mural students of the Senior Class, and those taking Honours, are charged a fee of $5 for the examination of the exercises which they must do during the session. Lecture cards to be sent to Prof. Glover.

GREEK.

PROFESSOR—Rev. J. Macnaughton, M.A.
ASST.-PROFESSOR—Rev. A. B. Nicholson, B.A.
TUTOR—J. Wallace, M.A.

JUNIOR CLASS.

Greek Grammar.
Greek Composition. (Text-book: Fletcher & Nicholson's *Elementary Greek Prose Composition*).
Translation from authors not specified.
Plato, *Lysis.*
Homer, *Odyssey VI* (Sikes).
Lucian, *Vera Historia I, II*, (Terran).

Extra-mural students are charged a fee of $3 for the examination of the exercises which they must do during the session. Lecture cards to be sent to the Rev. A. B. Nicholson.

SENIOR YEAR.

Thucydides II, (Merchant).
Homer, *Odessey XIX, XXIV*, (Merry).
Greek Grammar and Composition.
Translation from authors not specified.

HONOURS.

Candidates for Preliminary and Final Honours in Greek should note that special stress is laid on Composition and Unseen Translation. Passages will also be set for translation from the books specified below. The Greek History required from candidates for Special Certificates, is included in the Preliminary Honour Examinations, and must also be taken.

Books recommended:

Murray, *Greek Literature.*
Goodwin, *Greek Grammar.*
Grote, *History of Greece.*
Thirlwall, *History of Greece.*
Hogarth, *Philip and Alexander.*

Schuchhardt, *Schliemann's Excavations.*
Jebb, *Homer.*
Geddes, *Problem of the Homeric Poems.*

Instead of the editions mentioned below students may find it convenient to use the Teubner series.

Preliminary.

(The examination in this class must be taken at least one year before the Final examination).

Thucydides, II.
Plutarch, *Solon*, *Pericles.*
Homer, *Odyssey*, I-XII (Merry).
Euripides, *Orestes* (Wedd),
Sophocles, *Ajax* (Jebb).
Aristophanes, *Knights* (Merry).
Greek Grammar and Composition.

Final (1902).

Herodotus VIII, IX.
Thucydides II-VII.
Demonsthenes, *De Corona* (Goodwin) and *Olynthiacs* (Glover).
Plato, *Republic*, I, II, III, IV (Campbell & Jowett).
Aristotle, *Ethics*, I. II, X.
Plutarch, *Solon*, *Pericles* (vol. I, Teubner).
Homer, *Odyssey.*
Æschylus, *Agamemnon* (Sidgwick).
Prometheus (Sikes & Willson).
Sophocles, *Ajax* and *Oedipus Rex* (Jebb).
Euripides, *Medea.*
Aristophanes, *Clouds* (Merry), *Birds* (Merry).
Pindar, *Nemcans* (Gildersleeve).
Theocritus, *Selections.*

Extra-mural students of Senior and Honour Classes are charged a fee of $5 for the examination of the exercises which they must do during the session. Lecture cards to be sent to Professor Macnaughton.

COMPARATIVE PHILOLOGY AND SANSCRIT.

LECTURER—Rev. A. B. Nicholson, B.A.

1. A Course of Lectures on Greek and Latin Philology (one hour a week).

For reference: Henry's Comparative Grammar of Greek and Latin.
Brugmann's Comparative Grammar.

This course must be taken by all Honour candidates in Latin and Greek.

2. Elements of the Sanscrit Language.
Text-books: Perry's Sanscrit Primer.
Whitney's Sanscrit Grammar.
Lanman's Sanscrit Reader.

FRENCH, GERMAN AND ITALIAN.

1. *German.*

PROFESSOR—J. Macgillivray, Ph. D., (Leipsic).
TUTORS—E. J. Williamson, M.A.; Miss G. Jamieson, M.A.

JUNIOR CLASS.

Heyse, Vetter Gabriel.
Carmen Sylva, Ein Gebet.
Dahn, Sigwalt und Sigrith (Heath & Co.)
Chamisso, Peter Schlemihl.
Translation from authors not specified.
Grammar.
Writing German from Dictation.
Oral and Written Composition and Translation into German based on the works read.

SENIOR CLASS.

Spielhagen, Röschen vom Hofe.
Sudermann, Der Katzensteg (Heath & Co.)
Heyse, Der Verlorene Sohn.
Theodor Storm, Der Schimmelreiter.
Chamisso, Balladen (Balladenbuch, Simonson [Henry Holt & Co.]).
Heine, Balladen (Balladenbuch).
Jentsch, Volkswirthschaftslehre, I-VI.
Translation from authors not specified.
Writing German from Dictation.
Translation into German (Otto's Materials, Part I).
Oral and Written Composition based on the literature read.

HONOURS.

Preliminary.

(The examination in this class must be taken at least one year before the final examination. This class and Preliminary honour French may be taken as a pass class).

Heyse, Novellen, VIII (Gesammelte Werke).
Flaischlen, Neuland (Selections).
Schiller, Die Jungfrau von Orleans.
Gœthe, Faust I; Balladen (Simonson's Balladenbuch).
Lessing, Emilia Gallotti.
Translation from authors not specified.

History of German Literature in the 18th and 19th centuries, with the outline of the previous periods (Kluge, Geschichte der Deutschen National-Litteratur).

Writing German from Dictation.

Translation into German (Otto I).

Oral and Written Composition based on the works read.

Final.

(Unabridged editions only are to be used).

Flaischlen, Neuland.

Felix Dahn, Gelimer.

Freytag, Die Verlorene Handschrift.

Scheffel, Ekkehard, Der Trompeter von Säkkingen.

Deutsches Balladenbuch (Simonson).

Schiller, Don Carlos, Wallenstein. Maria Stuart, Die Jungfrau von Orleans, Wilhelm Tell.

Gœthe, Faust, Egmont, Torquato Tasso, Iphigenie.

Lessing, Nathan der Weise, Emilia Gallotti.

Braune, Gothische Grammatik (Ulfilas, Mark 3, 4, 5).

Wright's Primer of Old High German—Musspili, Das Ludwigslied, Otfrid's Evangelienbuch.

Wright's Primer of Middle High German—Hartman von Ouwe, Walter von der Vogelweide, Das Niebelungenlied.

Behagel, Die Deutsche Sprache.

Kluge, Geschichte der Deutschen National-Litteratur.

Translation into German (Otto, Part I).

Oral and Written Composition based on the works read.

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2. *French.*

Professor—J. Macgillivray, Ph.D., (Leipsic).

Tutors—E. J. Williamson, M.A., Georgina Jamieson, M.A.

Junior Class.

Ferdinand Fabre, L'Abbé Roitelet.

Anonymous, La Main Malheurense (Heath & Co).

Dumas, La Question d'Argent (Heath & Co.)

Richebourg, Le Million du Père Raclot (Edward Arnold, London.)

La Fontaine, Fables, Book I.

Translation from unspecified authors.

Grammar.

Writing French from Dictation.

Oral and Written Composition and Translation into French based on the works read.

SENIOR CLASS.

The. Bentzon, Contes de Tous Les Pays.
H. Gréville, Le Moulin Frappier (Macmillan & Co.)
Jules Verne, Voyage au Centre de la Terre (Arnold).
Augier, Le Gendre de M. Poirier.
Rostand, Cyrano de Bergerac (Holt & Co.)
La Fontaine, Fables, Books II, III.
Translation from unspecified authors.
Translation into French Prose (V. Spiers).
Writing French from Dictation.
Oral and Written Composition based on the works read.

HONOURS.

Preliminary.

(The examination in this class must be taken at least one year before the final examination.)

A. Daudet, Tartain sur les Alpes.
About Roman d' un brave Homme.
Chateaubriand, Atala, René.
Voltaire, Mahomet.
Molière, Le Misanthrope.
La Fontaine, Fables VII-XIII.
Translation from unspecified authors.
Translation into French Prose (V. Spiers).
Writing French from Dictation.
Oral and Written Composition based on the works read.
History of French Literature during the 17th, 18th and 19th centuries, with the outlines of the preceding periods, (Petit de Julleville).

Final.

(Unabridged editions only are to be used).

A. Daudet, Tartarin sur les Alpes, Lettres de mon Moulin.
Pierre Loti, Pêcheur d'Islande.
E. Zola, La Débâcle.
About, Roman d'un brave Homme.
Balzac, Eugénie Grandet.
Victor Hugo, Ruy Blas, Cromwell, Les Orientales, Les Misérables, vol. I.
Chateaubriand, Atala, René.
Beaumarchais, Le Barbier de Séville.
Voltaire, La Mort de César, Mahomet, Mérope.
La Fontaine, Fables.
Molière, Les Précieuses Ridicules, Le Bourgeois gentilhomme, L'Avare, Le Misanthrope.

Racine, Mithridate, Athalie, Iphigénie.
Corneille, Le Cid, Pompée, Polyeucte, Horace.
Translation into French prose (V. Spiers).
Oral and Written Composition based on the works read.
Clédat, Morceaux choisis des auteurs français du moyen âge, (Vie de Saint Alexis, Chanson de Roland, Ami et Amile, Le Chevalier au Lion, Le Roman de Renart [De Renart et de Tiecelon], Villehardouin).
Brachet, Grammaire Historique de la Langue Française.
Petit de Julleville, Leçons de Littérature Française.

3. *Italian*

PROFESSOR—J. Macgillivray, Ph.D., (Leipsic).

HONOURS.

Final.

De Amicis, Il più bel Giorno della Vita.
Del Testa, Le Coscienze Elastiche.
Carcano, La Nunziata.
L. Marenco, Perchè al cavallo gli si guarda in bocca?
Tasso, La Gersalemme Liberata, I, II.
Dante, Inferno, I-X.
Writing Italian from Dictation.
Translation from unspecified authors.
Grammar (Grandgent).
Translation into Italian (Grandgent's Italian Composition).
History of Italian Literature (Snell's Primer of Italian Literature (Macmillan & Co.)

NOTE—Extra-mural students of Modern Languages should obtain competent teachers for oral instruction as no candidate will be accepted who fails in the oral examination. Pass candidates may take the oral examination at outside centres, provided an examiner approved by the Senate be obtained; but Final Honour candidates must pass their oral examination at the University.

A tutorial fee of $3 is required for each pass class and $5 for each honour class.

ENGLISH LANGUAGE AND LITERATURE.

PROFESSORS—James Cappon, M.A.
TUTORS—Rev. John Sharp, M.A.; Selina G. Story.

JUNIOR CLASS.

1. Practical Course in Rhetoric and Composition.

2. Analysis of style in connection with the study of passages from Bacon, Jeremy Taylor, Addison, Johnson, De Quincy, Washington Irving, Macaulay, Ruskin.

The following texts (from which passages for analysis will be selected) may be procured from Maynard Merrill & Co., New York, twelve cents each.

Bacon's Essays (Truth, Boldness).
Irving's Sketch-book (Westminster Abbey, Visit to Shakespeare's Birthplace, Rip Van Winkle).
Macaulay's Essay on Boswell's Johnson.
Carlyle, Essay on Burns.

3. A detailed study (in class) of the following:
Chaucer, Prologue to Canterbury Tales. (The descriptions of the Knight, Squire, Prioress, Monk, Friar, Student, Merchant, Doctor, Shipman, Parson).
Shakespeare, Merchant of Venice.
Longfellow, Prelude, Nuremberg, The Belfry of Bruges, The Skeleton in Armour, Amalfi, The Village Blacksmith, The Day is Done, The Secret of the Sea.
Tennyson, The Palace of Art, The Lady of Shalott, "Love Thou Thy Land," The Lord of Burleigh.

Senior Class.

I.

The following works will be read in class:

(*a*) Shakespeare, Henry V.
Milton, Paradise Lost, Bks. I and II.

(*b*) Dryden, Epistle to Mr. Congreve, the descriptions of Achitopel and Zimri in *Absalom and Achitophel.*
Alexander's Feast.
Pope, Epistle to Arbuthnot (Satires).
(Read Gosse, Eighteenth Century Literature, chaps. I, III, IV and IX, X, XI).
Johnson, Vanity of Human Wishes.
Gray, Elegy, Ode on Eton College.
Collins, Ode to Liberty, Ode to the Passions.
Goldsmith, Deserted Village.
Burns, The Cotter's Saturday Night, A Bards Epitaph, To a Mouse; Lament of Mary, Queen of Scots; The Twa Dogs; The Auld Farmer's Salutation to his Mare.

In addition an acquaintance with the following works is required:

Macaulay, Boswell's Life of Johnson.
Lowell on Pope (My Study Windows).

II.

Development of poetry and poetic forms.
The Development of the rhymed couplet.
Development of Blank Verse.
History of the Ballad form, with modern developments.
History of the Sonnet.

(The extra-mural student may consult Corson's Primer of English Verse, and Gunmere's Poetics).

III.

(*a*) Lectures on the History of the English Language.

(*b*) Specimens of Early English (Morris & Skeat, Part II).
Extracts I, (Robert of Gloucester) and VII, (Cursor Mundi).

(*c*) For extra-mural students: O. F. Emmerson's History of the English Language (Macmillian & Co.) chapters III, IV, V, VII, IX, X, XIII, XIV, XV, XVII, XVIII, XIX, XX, XXI, XXII.

HONOURS.

Preliminary.

1. Anglo-Saxon:— (Sweet's Anglo-Saxon Reader).
Alfred's Preface to the *Cura Pastoralis*.
Alfred's Translation of Bœthius.
Alfred's Translation of Beda (Account of the Poet Caedmon).
Alfred's Wars with the Danes.
Ælfric's Life of King Oswald.
Charters (Eadgifu).
Extract from the Beowulf, lines 1-150.
The Battle of Maldon.

2. Skeat Principles of English Etymology (Chaps. VII, X, XI, XVIII, XIX, XXI).
For extra-mural students: O. F. Emerson's History of the English Language (Macmillan & Co.)

3. Ten Brink, Early English Literature, Book I.
Morris & Skeat, Specimens of Early English Literature Extracts I and VII.

Intermediate.

Tennyson, Ulysses.
Byron, Bride of Abydos, Childe Harold, Canto III.
Cowper, Table Talk, Progress of Error, Task, Book I.

Wordsworth, The Prelude, Books I, II, III, IV; the poems published as "Lyrical Ballads"; the poems published as "Memorials of a Tour in Scotland (1803)"; the poems "dedicated to National Independence and Liberty," Part I; The Old Cumberland Beggar, Yew Trees, She was a Phantom of Delight, I Wandered Lonely as a Cloud, Song at the Feast of Brougham Castle, Laodamia, Dion, Peter Bell, Fidelity, Ode to Duty, Character of the Happy Warrior, Ode on Immortality, Excursion, Book I.

Coleridge, Shelley (Ward Selections in "The English Poets)."

Keats, Ode on a Grecian Urn, Ode to a Nightingale, Isabella, Lamia.

Clough, The Bothie, Through a Glass Darkly, Ah! Yet Consider it Again! Qua Cursum Ventus.

Browning, (*a*) Grammarian's Funeral, Andrea del Sarto, Fra Lippo Lippi, Pictor Ignotus, The Bishop orders his Tomb, Bishop Blougram, How it Strikes a Contemporary, Epistle of Karshish, Cleon, (*b*) Abt Volger, Rabbi Ben Ezra, A Toccata of Galuppi's The Laboratory, The Glove, Dis Aliter Visum, Youth and Art, Waring, The Englishman in Italy, Old Pictures in Florence.

Arnold, On Translating Homer, Essays on Wordsworth and Byron, (Essays in Criticism, Second Series).

Carlyle, Sartor Resartus.

Final.

Candidates will take A or B in the following sections:

A.

Ruskin, Modern Painters Vol. III. Part IV Chaps. IV to XIII; (of the False Ideal, of the True Ideal, of Finish, of the Pathetic Fallacy, of Classical Landscape).

Carlyle, Life and Letters of Cromwell, [Introduction; Parts I and II; Letters CXXXIX and CXL (Part VI); Letter CLXXXVIII (Part VII).]

Scott, Old Mortality.

Emerson, The Method of Nature, Literary Ethics (Essays and Orations.

Arnold, Essays in Criticism (First Series).

De Quincey, On Style (Historical and Critical Essays).

Browning, A Blot in the 'Scutcheon.

Clough, Religious Poems (except Fragments of the Mystery), Amours de Voyage.

In addition the candidate is expected to understand the value of the following works as interpretations of life, and to answer questions of a general nature on their style and methods:

Scott, the Antiquary.
Thackeray, Vanity Fair.
Hawthorne, The House of the Seven Gables.
Carlyle, Life of John Sterling.
Emerson, the American Scholar.

B.

ROMANCE PHILOLOGY.

1. The poetry of Chaucer is the centre of studies in this course, and is treated mainly from the point of view of the historical relations of his *forms of verse* and *artistic methods*.
2. Origin and development of the octosyllabic couplet; origin and development of decasyllabic verse.
3. The Compleynte unto Pite, The Book of the Duchess, House of Fame, and The Legend of Dido (Legend of Good Women), will be taken up for the study of Chaucer's *materials*. Use Skeat's Editions of Chaucer's Minor Poems and The Legend of Good Women.
4. Development of the sonnet-form and its use by Petrarch Spencer, Shakespeare, Milton and Wordsworth.
5. The structure of the stanza, in Provencal and Italian poetry, and in Chaucer.

Consult Ten Brink, Chaucer, Studien zur Geschichte seiner Entwicklung. Chaucer's Sprache und Verskunst.

Sandras, Etude sur Chaucer.

Schipper, Altenglische Metrik (Englische Metrik, Erster Theil).

Grober, Romanische philologie (Romanische Verslehre von E. Stengel).

Bartsch, Grundriss zur Geschichte der provenzalischen Literatur. Sections 1, 2, 3, 4, 5, 13, 14, 18, 21, 22, 23, 24, 25, 26, 27, 28, 30, 44, 48, 49, 50, 56.

Dante, De Vulgari Eloquio. Lib. 2.

For Extra-Mural Students.

Junior Class.

Subjects of study the same as those for intra-mural students. A fee of $3 is charged for tutorial assistance.

Senior Class.

Subject of study the same as those for intra-mural students. A fee of $5 is charged for tutorial assistance.

Honours.

The subjects of study for Honours are the same as those for intra-mural students. A corresponding class will be formed for the purpose of assisting the extra-mural students in intermediate and final honours of this department, and in connection with final honour a special course of lectures will be given. The course will consist of extracts from Professor Capon's lectures, selected chiefly for the purpose of suggesting methods of analysis and criticism, and accompanied by papers containing hints for study and prescribing themes for exercises and essays. This course is voluntary, and a corresponding tutor has been appointed to communicate with extra-mural students who may wish to take it.

A special fee of ten dollars will be charged for this course.

N.B.—Candidates who do not take the full course described above must at least take the part relating to exercises and essays. For this part alone the fee will be five dollars.

HISTORY.

Professor—Rev. George D. Ferguson, B.A.
Tutor—Ethel Mudie, B.A.

Junior Class.

A.

Lectures on:

The Study of History, its methods and purposes.
The Fall of the Roman Empire and rise of new nationalities.
The Feudal System.
The Crusades.
The struggle of the Towns in the Middle Ages for Independence.
The Growth of Monarchy, especially in France.

Students will also be examined on:

Hallam's Middle Ages, Chaps. I to VII.
Henderson's Historical Documents of the Middle Ages.

Books recommended to be read:

Gibbon's Decline and Fall of the Roman Empire.
Guizot's History of France.
Guizot's History of Civilization in Europe.

Senior Class.

Lectures on:

The developement of representative government.
The British Constitution.

The Constitution of the United States.
The Canadian Constitution.

Students will also be examined on:

Hallam's Middle Ages, Chaps. VIII and IX.
Green's Larger History of the English People.
Bourinot's Constitution of Canada.

Books recommended to be read:

Freeman's Growth of the English Constitution.
Kingsford's History of Canada.
Bryce's American Commonwealth.

Fortnightly essays are required in each class.

For Extra-Mural Students.

JUNIOR CLASS.

Text-books: Hallam's Middle Ages, Chaps. I to VII.
Henderson's Historical Documents of the Middle Ages.

Students are also required to make themselves familiar with other books mentioned below, and to write essays in connection with them, which are to be given in punctually at the time stated.

Essay:—Rise of the Communes in France. Oct. 16th.
Thierry's History of the Tiers Etat.
Guizot's History of Civilization in France.

Essay:—Innocent III and the Hohenstauffen. Nov. 13th.
The Popes and the Hohenstauffen (Epochs of Church History Series).
Hallam's Middle Ages, chap. V.

Essay:—The Lombard and the Tuscan Leagues. Dec. 4th.
The Tuscan Republics. (Story of the Nations Series.)
Hallam's Middle Ages, chap. III.

Essay:—The Cortes of Spain. Dec. 20th.
Hallam's Middle Ages, chap. IV.

Essay:—The Influence of the Crusades on Europe. January 17th.

The Crusaders, by Rev. G. W. Cox, M.A., (Epoch Series).

Prescott's Robertson's Charles V, Introduction on the progress of the History of Europe to the XVI century.

The Crusades, (Story of the Nations Series).

Essay:—The state of Europe just before the French Revolution. Feb. 8th.

The French Revolution and the First Empire, by S. R. Gardiner. (Epoch Series).

Essay:—The Congress of Vienna. March 12th.

Allison's History of Europe, 1st series, chap. LXXVII.

Life and correspondence of Price Talleyrand, Part VIII.

SENIOR CLASS.

Text books: Hallam's Middle Ages, chap. VIII and IX.
Green's Larger History of the English people

Essay:—The English Courts under the Anglo-Saxons, and the Curia Regis of the Nomans. October 18th.

Hallam's Middle Ages, chapter VIII.

Essay:—The Constitutional changes made in the reign of Henry II and Edward I. November 14th.

The Early Plantagenets, by Rev. W. Stubbs, D.D., Bishop of Chester. (Epoch Series).

Essay:—The formation of the House of Commons and the growth of Parliament. December 13th.

Hallam's Middle Ages, Chap. VIII, and Green's Larger History of the English people, vol. 2nd.

Essay:—Cardinal Wolsey's Foreign policy. January 11th.

Froude's History of England.

Cardinal Wolsey, by Prof. M. Creighton, Bishop of London. (English Statesmen Series).

Essay:—Oliver Cromwell as a Statesmen. February 12th.

Carlyle's Letters and Speeches of Oliver Cromwell.

Oliver Cromwell, by Fred. Harrison. (English Statesmen Series).

Cromwell's Place in History, by S. R. Gardiner.

Essay:—A comparison of the American Congress with the British Parliament. March 12th.

Bryce's American Commonwealth, Part I.

Bagebot's English Constitution.

HONOURS.

Preliminary.

LECTURES ON THE GENERAL PRINCIPLES OF GOVERMENT.

Students will be examined on:

Stubb's Constitutional History of England, vols. I, II, and III, and Select Charters.

Gneist's English Constitution.
Guizot's Representative Government.
Rousseau's Social Contract.
Mill's Representative Government.

Boooks recommended:

Machiavelli's Prince.
Dicey's, The Law and the Constitution.
Hearn's Government of England.
Kemble's Anglo-Saxons' in England.

Final.

Lectures:

(*a*) A comparison of the British Constitution with other constitutions, especially with that of the United States. (*b*) On the Government of Colonies. (*c*) On the Foreign Policy of Britain and Cabinet Government, and its relation to the other powers in the state.

Students will also be examined on:

Hallam's Constitutional History of England.
May's Constitutional History.
Bryce's American Commonwealth.
Bagehot's English Constitution.
Houston's Constitutional Documents of Canada.

Books recommended:

Todd's Parliamentary Government in England.
Todd's Parliamentary Government in the British Colonies.
De Tocqueville's Democracy in America.

Besides the Essays mentioned, frequent exercises will be prescribed in both Honour and Pass classes, based on the text-books, which the Tutor will carefully examine and submit to the Professor, and notes and suggestions will be offered which will afford assistance to the student. A fee of $3.00 for the Junior Class, and $5.00 for the Senior and Honour Classes, payable with the Registration fee not later than the 16th October, is required.

The books mentioned in connection with the prescribed essays are suggested as easily procured and at little cost, but others of equal value may be substituted.

Both Intra and Extra-mural Students in Honours are required to write the following essays—and in writing them to show some acquaintance with original authorities.

Preliminary.

1. The social and political positions of the Boroughs in England previous to the 14th century.
   Maitland's Township and Borough.
   Merewether and Stephen's History of Boroughs.
2. Domesday Book.
   Domesday Book, with Ellis' Instroduction.
   Maitland's Domesday and Beyond.
3. The English Manor and Maniorial Courts.
   Vinogradoff's Villianage in England.
   Maitland's Select Pleas in Manorial Courts, Selden Society, volume II.
4. Development of English Law down to the Tudors.
   Pollock and Maitland's History of English Law.
   Sir James Stephen's Introduction to Commentaries on the laws of England.
   Phillips Englische Reichs and Rechtsgeschichte, including Glanvils Tractatus de Legibus regni Angliae.
   Stubb's Constitutional History.

Final.

1. The Foreign Policy of England from Henry VII to the close of Queen Anne's reign.
   Seeley's Foreign Policy of England.
   Montague Burrow's History of the Foreign Policy of Great Britain.
   Heeren's Essay on the rise and growth of the Continental interests of Great Britain.
2. The Functions of the House of Lords.
   Pike's History of the House of Lords.
   Bagehot's Essay on the Functions of the House of Peers.
3. The Cabinet in its relations to the Sovereign, to the House of Lords, and to the House of Commons.
   Torren's History of Cabinets.
   Bagehot's English Constitution.
4. Parliamentary Government in England and in the United States, especially as exemplified by the committees of the United States Congress.
   Bryce's American Commonwealth.
   Dicey's Law of the Constitution.
   Bagehot's, The English Constitution.
   Todd's Parliamentary Government.

MENTAL AND MORAL PHILOSOPHY.

Professor of Moral Philosophy—John Watson, M.A., LL.D.

Professor of Mental Philosophy—S. W. Dyde, D.Sc., LL.D.

Tutor in Moral Philosophy—Rev. J. Sharp, M.A.
Tutor in Mental Philosophy—Rev. J. Sharp, M.A.

Junior Class—Professor Dyde.

Lectures on the method and aim of Philosophy. The history of Greek reflection. Study of Plato's Theætetus and Aristotle's Ethics (Peters' or Welldon's translation). Attendance and exercises are compulsory.

Books recommended to be read :

Plato, Republic; Wallace, Epicureanism; Carlyle, Sartor Resartus; Herbert Spencer, Justice.

Senior Class—Professor Watson.

Text-book: Watson's *Outline of Philosophy with Notes Historical and Critical.* Supplementary Lectures, Tuesday and Thursday. Attendance is Compulsory.

Note.—Candidates in Junior and Senior Philosophy, who do not pass the April or supplemental examination, must in the session in which they desire again to try the examination, write the essays prescribed for extra-mural students, hand them in to the tutor for examination and correction, and pay to the Registrar the tutorial fee.

For Extra-Mural Students.

Junior Class.

Students are expected to show familiarity with the substance of the books mentioned below. They are recommended to take up the work in the following order:

1. Schwegler, History of Philosophy, XI-XV.
   Plato, Theætetus (Dyde's Translation).
   Plato, Republic, Bks. I. II.
   Essay for 15th Oct :—The relation of Plato to the Sophists.
2. Plato, Republic, Bks. III, VII.
   Schwegler, History of Philosophy, XIV.
   **Essay* for 1st Nov.:—Plato's Theory of Education.

*Nettleship's article on "Plato's Theory of Education" in Hellenica (Rivingtons) is very valuable, but a knowledge of it will not be required.

3. Aristotle, Nichomachean Ethics, (Peters' Translation).
   Schwegler, History of Philosophy, XVI.
   Essay for 21st Dec.:—The relation of Aristotle's Ethics to his Psychology.
4. Schwegler, History of Philosophy, XVII-XXI.
   Capes, Stoicism (New York: Pott Young & Co).
   Wallace, Epicureanism.
   Essay for 1st Feb.:—Stoicism and Epicureanism.
5. Schwegler, History of Philosophy, XXII-XXVI.†
   Essay for 15th Feb.:—The Principles of the Cartesian Philosophy.
6. Schwegler, History of Philosophy, XXVII, XXXV.
   Fraser, Selections from Berkeley.
   Fraser, Berkeley (Blackwood's Philosophical Classics).
   Essay for 14th March:—The development of the Philosophy of Berkeley.

For the examination, correction and return of the essay a Tutor's fee of $3 is charged. The essays are to be sent to the Tutor and the fee to the Registrar.

Senior Class.

Students will be examined upon Watson's "Selections from Mill," "Outline of Philosophy, with Supplementary Notes, Historical and Critical," and "Hedonistic Theories." Weekly exercises will be prescribed, covering the whole of this work. These are compulsory and they will be examined and corrected by the Tutor, under supervision of the Professor. To compensate the Tutor, a special fee of $5 is charged, which must be sent to the Registrar at the time of registration. The first exercise must be sent in by the middle of October.

Honours.

Preliminary—Professor Watson.

Critical Study of the Philosophy of Kant:
Text-books: Watson's Selections from Kant, and Caird's Critical Account of the Philosophy of Kant.

Final.

Students desiring to write for Honours in Latin, Greek, Moderns, English, History or Political Science may complete their Honour Course by taking any one of the following departments:

†See also Caird's article "Cartesianism," in the Encyclopedia Britannica.

A. First Department.

Critical Study of the Philosophy of Kant. (See Preliminary Honour Class). Professor Watson.

Special Classes for 1901-02.

Critical Study of Hegel's Wissenschaft der Logik. Professor Watson.

English Philosophy in the 17th and 18th centuries. Professor Dyde.

Essays for the Class of English Philosophy:

15th Nov. : Relation of Locke to Hobbes.
20th Dec. : Green's Analysis of Locke. (Green's Introduction of Hume.
7th Dec. : Spencer's Unknowable. (Spencer's Frist Principles. Caird's Evolution of Religion, vol. I).
14th March : Bradley's Interpretation of the Absolute. (Bradley's Appearance and Reality; A New Theory of the Absolute: *Contemp. Rev.* for November and December, 1894).

Candidates will be examined on the following works:

Kant, as in Preliminary Honour Class.
Bacon, Novum Organum.
Hobbes, Leviathan.
Locke, Essay on the Human Understanding.
Hume, A Treatise on Human Nature.
Mill, Watson's Selections.
Spencer's First Principles, Data of Ethics.

Books recommended to be read:

Bacon, Essays and Advancement of Learning; Spedding, the Life and Times of Bacon; Selections from Milton's Prose Works; Dryden, Religio Laici, The Hind and the Panther; Pope, Essay on Criticism, An Essay on Man; Green, Introduction to Hume; Carlyle, Heroes and Hero Worship; Darwin, Origin of Species; Matthew Arnold, Literature and Dogma; Bradley, Appearance and Reality.

B. Second Department.

Critical Study of the Philosophy of Kant (See Preliminary Honour Class). Professor Watson.

Special Classes for 1901—1902.

Lectures on The Philosophy of Aristotle. Prof. Watson.

Greek thought with special reference to Plato's Statesman, Sophist and Philebus, and Aristotle's Poetics. Prof. Dyde.

Essays for Class in Plato

15th Nov. : The Socrates of Plato and the Socrates of Xenophon. (Plato's Dialogues, Xenophon's Memorabilia).

20th Dec. : The Sophistic conception of the state. (Plato's Protagoras and Republic II, Aristotle's Politics I.

7th Feb. : Plato's Proof of the Existence of God. Republic II, III, Laws X, XII).

14th March : Aristotle's Definition of Tragedy. (Aristotle's Poetics, Bosanquet's History of Æsthetic).

Candidates will be examined on the following works:

Kant, as in Preliminary Hour Class.
Plato, Theætetus, Republic.
Aristotle, Organon.
Mill, System of Logic, Utilitarianism.

Books recommended to be read:

Campbell, Translation of Æschylus; Whitelaw, Translation of Sophocles; Way, Translation of Euripides; Butcher, Aristotle's Poetics; Bosanquet, History of Æsthetic; Pater, Plato and Platonism; Wallace, Epicureanism; Maier, Die Syllogistik des Aristotles.

C. Third Department.

Critical Study of the Philosophy of Kant. (See Preliminary Honour Class). Professor Watson.

Special Classes for Session 1901-1902.

Critical Study of Hegel's Wissenschaft der Logik. Professor Watson.

Examination of Hegel's Philosophy of Right (Dyde's Translation), and Bosanquet's Philosophical Theory of the State. Professor Dyde.

Essays for Class in Hegel's Phil. of Right:

15th Nov.: Hegel's Theory of Crime and Punishment. (Phil. of Right, pp. 90-103; Bosanquet, Chap. VIII).

20th Dec.: Time and Dialectic. (Phil. of Right, §§ 3, 341-360 etc).

7th Feb.: The Nature of Evil. (Phil. of Right, § 140).

14th Mar.: Religion and the State. (Phil. of Right, § 270).

Candidates will be examined on the following works:

Kant as in Preliminary Honour Class.
Descartes, Discourse on Method and Mediations.

Spinoza, Ethica, De Intellectus Emendatione.
Hegel, Philosophy of Religion, Philosophy of Right.

Books recommended to be read:

Caird, Hegel; Wallace, Hegel's Philosophy of Mind, Prolegomena to the Study of Hegel's Philosophy.

MENTAL AND MORAL PHILOSOPHY.

Students desiring to write for Honours in Mental and Moral Philosophy may take A. and B, A and C, or B and C.

Students taking the full course in Mental and Moral Philosophy will meet Professor Watson for the independent investigation of philosophical systems and theories.

Books recommended to be used, and essays:

See the Several departments.

It is strongly recommended that candidates for Honours in Mental and Moral Philosophy should acquire a competent knowledge of German.

POLITICAL SCIENCE.

PROFESSOR—Adam Short, M.A.
TUTOR—W. W. McLaren, M.A.

Students are recommended to take the class of Junior Philosophy not later than that of Junior Political Science.

JUNIOR CLASS.

The lectures will include a discussion of the general principles of Political Economy.

Text book for general reference: Gide's Principles of Political Economy.

SENIOR CLASS.

The lectures will include a critical examination of the leading theories of the State, and a discussion of the nature of Social and Political Relations.

In both classes essays will be required.

For Extra-Mural Students.

Junior Class.

Political Economy.

Candidates will be examined on the following books:

Marshall's Economics of Industry.
Jevons' Money and Mechanism of Exchange.
Toynbee's Industrial Revolution.

Essays During Session 1901-1902.

Relation of the economic to the social life. Marshall, Book I; Toynbee.

The growth of free industry. Marshall, Book I; Toynbee.

Rent, its nature and the conditions on which it depends. Toynbee, chap. 12; Marshall.

Trade Unions and their influence. Marshall, Book VI. Toynbee, chaps. 11 and 14.

Credit documents and their function in modern trade; Jevons.

Nature of modern industrial organization. Marshall, Book IV; Toynbee.

The place of capital in production. Marshall, book II; chap. 4; Book VI, chaps. 6, 7, 8.

A fee of $3.00 is required.

Senior Class.

Theory of the State.

Candidates will be examined on the following books:

Plato's Republic, Books I, VI.
Rousseau's Social Contract.
Leroy Beaulieu, The Modern State.

Essays During Session 1901—1902.

Socrates' argument in support of Justice. Republic, Book I.

A comparison of the views of Plato and Rousseau as to the origin of the State. Plato Book II; Rousseau Book I.

A general examination of Plato's view of the State.

A general examination of Rousseau's view of the State.

The relations of individuals to Society. Leroy Beaulieu; Rousseau.

Comparison of the Ancient and Modern State.

The function of the State. Leroy Beaulieu.

A fee of $3.00 is required.

HONOURS.

Preliminary.

This Class will meet for the discussion of Economic, Social and Political Principles, and for the critical reading of portions of the works prescribed for Honours.

A course of lectures will be given on Canadian Economic and Political History.

Candidates will be examined on the following books:

Political Economy.

Smith's Wealth of Nations.
Mill's Principles of Political Economy.
Nicholson's Principles of Economics, vol. I.
Ingram's History of Political Economy.

Society and the State.

Aristotle's Politics.
Mill's Representative Government.
Maine's Ancient Law.
Carlyle's Sartor Resartus and Past and Present.
Bosanquet's Philosophical Theory of the State.

Final.

This class will meet for the more detailed discussion of Economic, Social and Political Principles.

Candidates must show familiarity with the substance of the following books:

Political Economy.

Cunningham's Growth of English Industry and Commerce.
Wells' Recent Economic Changes.
Jevons' Money and Mechanism of Exchange.
Seligman's Essays in Taxation.
Brentano's, The Relation of Labour to the Laws of to-day.

Society and the State.

Bluntschli's Theory of the State.
Holland's Elements of Jurisprudence.
Arnold's Culture and Anarchy.
Rae's Contemporary Socialism.

An essay embodying independent work in some section of the Honour Course will be required from every candidate for honours.

MATHEMATICS.

PROFESSOR—N. F. Dupuis, M.A., F.R.S.C.
ASSISTANT—N. R. Carmichael, M.A.

JUNIOR CLASS.

The theory and practice of *Algebra* to the Binomial theorem inclusive. Dupuis' Algebra—the first thirteen chapters, omitting chapter XI.

Geometry of the point, line and circle in the plane. Parts I. and II. and selections from Part III Dupuis' Plane Geometry.

Besides numerous class exercises, weekly written exercises will be required.

SENIOR CLASS.

Algebra—Dupuis' Algebra, from the twelfth chapter to the end.

Geometry—Part III of Dupuis' Plane Geometry, and the first 131 pages of Dupuis' Solid Geometry.

Trigonometry—Preceeding De Moivre's theorem.

Besides numerous class-exercises, periodical written exercises will be required. Owing to recent changes in the curriculum this class will be made as practical as possible.

HONOURS.

Candidates who matriculate with Honours in Mathematics are not required, in their subsequent Honour Course, to take either the Junior or the Senior Class, but they are advised to read the Geometry of the Junior Class.

Candidates who did not matriculate with Honurs must take the Junior Class as preparatory to their Honour work, but they need not take the Senior Class inasmuch as the work of this class is covered in the first group of honour subjects.

The Honour work includes the following subjects:

Group I.

1. *Synthetic Modern Geometry.* Dupuis' Geometry, parts III, IV, V.
2. (*a*) *Algebra.*—Dupuis' Algebra, from chapter XI to the end. Refernce to Hall and Knight's Higher Algebra, the first twenty-seven chapters.
   (*b*) *Plane Trigonometry*, Preceding De Moivre's theorem, with various problems and applications. Hobson and Jessop's Plane Trigonometry.
3. Elementary Co-ordinate Geometry, through the Conics. Lectures supplemented by examples from Charles Smith's Conics.

Group II.

4. *Synthetic Solid Geometry.*—Dupuis' Solid Geometry.
5. (*a*) *Algebra.*—Hall and Knight's Higher Algebra, from chapter XXVII to the end.
   (*b*) *Trigonometry*, following De Moivre's thorem.
6. *Elementry Differential and Integral Calculus.*—Reference to Edwards.

Groups III and IV.

A
7. *Analytic Solid Geometry.*—Aldis' Geometry, supplemented by lectures and examples.
8. (a) *Higher Differential Calculus.*—Edwards.
   (b) *Integral Calculus.*—Williamson.
9. (a) *Finite Difference.*—Boole.
   (b) *Differential Equations.*—Johnson.

B
10. Spheric Trigonometry, Geodesy and Astronomy.
11. *(a)* Determinants and Theory of Equations.
    (b) Quaternions. Kelland and Tait's Quaternions.
12. Higher Conics and Curves. Salmon.

TIME-TABLE FOR CLASSES IN MATHEMATICS.

	X.	XI.	III.	IV.
Monday.		Syn. Solid Geometry.	Junior.	Syn. Modern Geometry.
Tuesday.	Senior.	Algebra and Trig. of Gr. II.		Algebra and Trig of Group I.
Wednesday.	Differential and Integral Calculus, Gr. III & IV.		Junior.	Analytical Solid Geometry.
Thursday.	Senior.	Calculus of Group II.	El. Co-ord. Geometry and Conics. Group I.	
Friday.	Diff. Eq., Final Diff. Gr. III & IV.		Junior.	

Candidates who take group I as a part of their Pass Course, and who make a minimum of 33 per cent. upon each subject and 50 per cent. upon the whole group, may substitute this group for Senior Mathematics, together with any one of the optional subjects mentioned in course I and II, on page 43 and 44.

Candidates for Honours must make a minimum of 40 per cent. upon each subject of group I, and 60 per cent. upon the whole group, at one examination, after which no further examination on this group will be required.

Candidates for Honours must make at least 50 per cent. upon the subjects numbered 4, 6 and 10, but honour standing will be determined by the examinations on the subjects numbered 5, 7, 8, 9, 11 and 12.

The subjects of Groups II, III and IV must be taken in not more than two examinations, and at any examination a candidate may offer any subject upon which he has failed at a previous examination. But 5, 7, 8, 9, 11 and 12 must be taken at the final examination.

A and B of Group III will be taken up in alternate years. A. in 1901-02.

Candidates are recommended to follow the order of subjects as indicated above, as nearly as may be practicable.

Extra-mural students requiring tutorial assistance can receive the same on payment of $3.00 for each Pass Class or $5.00 for any group of the Honour Classes.

PHYSICS.

PROFESSOR—D. H. Marshall, M.A., F.R.S.E.

DEMONSTRATOR—C. R. MacInnes, M.A., Ph.D.

JUNIOR AND SENIOR CLASSES.

Lectures and experiments are given in the following subjects :

Properties of Matter.

Extension—Inertia—Mass— Density —Gravitation—Specific weight—Weight of gasses—Molecular forces—Energy.

Dynamics.

Kinematics—Statics of solids and fluids—Kinetics of solids and fluids.

Heat.

Thermometry—Calorimetry (Specific and Latent Heats)—Hygrometry — Transference of Heat (Conduction and Radiation)—Dynamical theory of heat.

Magnetism.

With special reference to terrestrial magnetism.

Electricity.

Frictional Electricity—Voltaic Electricity—Electro-Magnetism—Dia-Magnetism--Magneto-Electricity--Thermo-Electricity—Electro-Dynamics.

Light.

General Laws of Radiant Energy--Geometrical Optics—Physical Optics—Construction and use of Optical Instruments—Spectrum analysis.

Sound.

Propagation of Waves—Physical Theory of Music.

Algebra, Geometry, and Trigonometry are applied to the solution of problems, and weekly exercises are given throughout the session.

In the Junior Class the following subjects are principally studied:—Properties of matter, dynamics, heat, magnetism, and frictional electricity. In the Senior:—Dynamics, voltaic electricity, electro-magnetism, magneto-electricity, thermo-electricity, light, and sound.

Text-book:—Marshall's Introduction to the Science of Dynamics, new edition, published by R. Uglow & Co., Kingston. Price $1.50.

The following books should be consulted in connection with the lectures:

Gage's Principles of Physics, or Ontario H. S. Physics Part II.
Tait's Properties of Matter.
Balfour Stewart's Heat.
Silvanus Thompson's Electricity and Magnetism.
Taylor's Sound and Music.
Sound by E. Catchpool (Hinds & Noble, N.Y.)
Light, by R. W. Stewart (Hinds & Noble, N.Y.)
Deschanel's Natural Philosophy or Ganot's Physics.
Clerk Maxwell's Matter and Motion.
Chamber's Mathematical Tables.

NOTE.—Copies of all these works are kept in the Physical Laboratory and may be freely consulted by any student during the session.

Students who have not studied the Ontario High School Physics are recommended to do so, as questions from this work will be given at the monthly examinations.

Students in the Junior and Senior Classes are offered the privilege of experimenting in the Physical Laboratory under regulations to be explained at the beginning of each session.

The classes of Junior and Senior Mathematics should be taken if possible before the Physics classes.

Honours.

Preliminary.

Students should take Groups I and II of Honour Mathematics before entering this class.

The work will be a continuation of that done in the Junior and Senior, with applications of higher mathematics. Marshall's Dynamics, Part III, will be used as a text-book, (to be obtained at the College, price 50c.) Also two or more of the following:

Thomson and Tait's Natural Philosophy.
Besant's Hydrostatics.
Frost's, Newton's Principia.
Clerk Maxwell's Theory of Heat.
Tait's Thermodynamics.
J. J. Thomson's Elements of Electricity and Magnetism.
Cumming's Theory of Electricity.
Aldis' Geometrical Optics.
Lloyd's Wave Theory of Light.

For Session 1901-02 the following will be read:

Besant's Hydrostatics—Clerk Maxwell's Theory of Heat—J. J. Thompson's Electricity and Magnetism.

Final.

Student's studying for higher honours will be directed by the professor in reading the application of the higher mathematics to physical science. A knowledge of the Differential and Integral Calculus and of Analytical Geometry of three dimensions is necessary.

The subjects first taken up should be Dynamics of a particle and of a rigid body, for which the student may read the following works:

Todhunter's or Minchin's Analytical Statics.
Tait and Steele's Dynamics of a Particle.
Pirie's Lessons on Rigid Dynamics.

Note.—Any of the more expensive text-books in the Honour Physics Classes can be obtained from the Professor on deposit of its price, and if returned within a year, three-fourths of the deposit will be repaid.

PHYSICAL LABORATORY.

The Physical Laboratory is open daily during the session from 10 to 4 o'clock.

Instruction is given in experimentation; and facilities are offered for studying the construction and use of physical apparatus, and for doing independent and original work.

Students taking honours in Physics are required to work in the laboratory for three sessions.

BOTANY.

PROFESSOR—Rev. James Fowler, M.A.

Pass Class.

Lectures embrace the following subjects:

General morphology of the plant body, segmentation, symmetry, arrangement of lateral members on the common axis, branch systems.

Special morphology of the members, (1) Roots, different forms, duration, parasites; (2) Stems, their forms, climbing stems, &c.; (3) Leaf, phyllotaxis, venation, vernation, forms; (4) Trichomes, &c.; (5) Flowers,; (6) Fruits; (7) Arrangements for cross-fertilization, close fertilization.

Anatomy of plants (Histology), cell, cell-wall, protoplasm, Chlorophyll, starch, ect.; formation of new cells, tissues, system of tissues.

Study of specimens belonging to leading orders.

Text-book, Spotton's Canadian Flora.

HONOURS.

Preliminary

The class meets daily during the session at 11 a. m.

Careful study of Phænogamous plants of Canada, embracing about three hundred species, representing all available orders from Ranunculaceæ to Naiadaceæ.

The subjects of Morphology and Histology are carefully studied with the aid of models, diagrams and microscopic specimens.

Physiology, elementary constituents, plant-food, absorption, metabolism, respiration, transpiration, movements of water and gases, chemical processes, root pressure, bleeding, growth, effects of moisture, temperature, light, &c.

Laboratory work daily, consisting of study of specimens.

Essays are required on prescribed subjects:

Books for study and laboratory work:

Gray's Structural Botany.
Bessey's Botany.
Gray's Manual.
Atkinson's Elementary Botany.
Barnes' Plant-Life.
Spalding's Introduction to Botany.
Clark's Practical Methods in Botany.

Students are required to bring at least two hundred specimens of plants for their own use.

Final.

This classs meets daily during the session.

The first half of the session is devoted to the more extended and minute study of (1) Morphology and (2) Histology. The subject of Physiology is taken up during the second half.

Practical work in the laboratory consists in the careful examination of (1) Algae; (2) Fungi and Lichenes; (3) Bryophyta: (4) Pteridophyta; (5) Gymnospermae; (6) Gramineæ; (7) Cyperaceæ.

Essays are required on prescribed subjects.

Vines' "A Students Text-book of Botany" must be read for examination.

Books for laboratory work and reference:

Gray's Manual.
Sach's Text-book of Botany.
Sach's Physiology of Plants.
Lesquereux and James' Mosses of N. America.
Tuckerman's Lichens.
Strasburger and Hillhouse's Practical Botany.
Arthur, Barnes and Coulter's Plant Dissection.
Kerner's Natural History of Plants.

Houour examinations are held at the University only.

ANIMAL BIOLOGY.

PROFESSOR—A. P. Knight, M.A., M.D.

TUTORS—A. B. Richardson, B.A., M.D., and.....

Students in medicine are required to take the Pass Class.

Students in arts who intend subsequently to study medicine are advised to take the Pass and Honour Classes, and thus complete their physiology and histology during their undergraduate course. The honour course in science, number 2 (with Animal Biology) page 56, or the specialists' course in science, page 59, is suitable for this purpose.

Pass Class.

Lectures or demonstration will be given tri-weekly at 9 A.M.

The Lectures treat of protoplasm, cells, cell division, reproduction, early stages of development, tissues, organs, differences between animals and plants, general view of invertabrata and of vertabrata, organic evolution.

The Laboratory work consists of such dissections and demonstrations as will elucidate the subject of the lectures. The lectures are illustrated by diagrams, charts, and lantern transparencies. Text-book, Wright's High School Zoology.

The senior leaving examination in biology of the Education Department is accepted in lieu of attendance and examination in this class.

Extra-Mural Students.

Extra-mural students and students who do not attend the class lectures and demonstrations are required to do the practical work outlined for Honour Matriculation in Zoology. They will be examined on Professor Ramsay Wright's *High School Zoology*.

Honours.

Candidates who have not matriculated with honours in biology and who intend to take an honour course in the subject must first take the pass class.

The course in Comparative and Practical Anatomy extends over two years, and the work of each year is read in class every alternate session.

Preliminary honours are awarded on the honour papers of the first session in honours.

Final honours are awarded on the honour papers of both sessions taken together.

The lectures and demonstrations in "physiology" and "histology" are attended simultaneously by students in medicine and arts. The honour work in physiology for the second year lasts during the whole session.

Graduation in honours in the department of biology lessens, by one year, the length of the course required by the Medical Council of Ontario.

Preliminary honours are accepted as equivalent to a pass class on a pass course, and final honours as equivalent to two pass classes.

SESSION 1902-1903, 12 M. to 1 P.M.

Biology of Invertebrata.

Examination of typical specimens of the different classes.
Histology and Embryology.
Physiology.
Daily laboratory work.
Dissections of all the forms in Huxley & Martin's text-book (last edition), and in addition, a grasshopper, star fish, or sea-urchin, squid, sponge and hydroid.

SESSION 1901-1902, 12 M. to 1 P.M.

Biology of Vertebrata.

Study of types of the different divisions of Vertebrata.
Histology and Embryology.
Physiology.
Daily laboratory work.
Dissections of balanoglossus, a tunicate, amphioxus, a fish, frog, bird and mammal.

Books for study and laboratory work:

Test-book of Physiology, 2 Vols., edited by E. A. Schafer, L.L.D.

Kirk's Hand-book of Phisiology, last edition.
Claus and Sedgwick's or J. Arthur Thompson's Zoology.
Huxley and Martin's Practical Biology.
Parker's Zootomy.
Brook's Handbook of Invertebrate Zoology.
Weidersheim's Elements of Comparative Anatomy.
Foster & Langley's Histology, or Dr. Stirling's.
Balfour & Foster's Elements of Embryology.
Darwin's Origin of Species.

The Honour examinations in this department are held at the University only.

CHEMISTRY.

PROFESSOR—William L. Goodwin, D. Sc., Edin.

LECTURER—John Waddell, B.A., D. Sc., Ph.D.

DEMONSTRATORS—Isaac Wood, M.A., M.D.; C. W. Dickson, M.A.; A. D. McRae, B.A.; J. McGuire.

JUNIOR CLASS.

Monday, Tuesday and Wednesday (or Thursday) at 11 a.m.

Chemical Species—Crystals and Crystallization—Chemical Change—Laws of Combination—Relations of Heat to Chemical Changes—Notation—Equations—Nomenclature—Volume Relations of Gases in Chemical Change—Volume Formulas—The Atomic Theory—Descriptive Chemistry of the Commoner Elements and their Compounds—Electrolysis—Spectrum Analysis.

Books: Goodwin's Chemistry (Uglow & Co., Kingston).
Waddell's Arithmetic of Chemistry (Macmillan & Co).

SENIOR CLASS.

Thursday and Friday at 11 a.m.

1. Organic Chemistry.
2. Chemical Laws and Theories.
3. Special Chemistry of the Metals, their occurrence in nature, reduction and uses.

Books: Van Deventer's Physical Chemistry (MacMillan & Co.)
Goodwin's Chemistry, chapters XIII, XIV, and XVII-XXI, and Supplement, (Uglow & Co.)

Students intending to proceed to Honours in Chemistry are advised to begin Qualitative Analysis in the year in which they take Senior Chemistry.

Honours.

Preliminary.

(May be taken as a Pass Class).

1. Organic Chemistry.

   The student is expected to master the contents of Remsen's Organic Chemistry (latest edition).

   Wednesday, Thursday and Friday at 3 p.m. (First Term).

2. Industrial Chemistry, or *Physiological and Pathological Chemistry.

   Wednesday, Thursday and Friday at 3 p.m. (Second Term).

3. Crystallography (Elementary). See Mineralogy. (First Term).

4. Qualitative Analysis and Blowpiping.

5. Qualitative Analysis of Minerals, &c., or *Urinalysis, &c., (See page 96).

   Subjects (1), (2) and (3) must be taken at one examination.

   Subjects (6) and (7) must be taken at one examination.

Books:

Remsen's Organic Chemistry (D. C. Heath & Co.)
Bernthsen's Organic Chemistry (Blackie & Sons).
Halliburton's Chemical Physiology.
Williams' Crystallography (Henry Holt & Co.)
Arthur S. Noyes' Qualitative Analysis.
Thorp's Industrial Chemistry (Macmillan & Co.)

Final.

6. General Chemistry: Kinetic Theory of Gases; Properties of Solutions; The Periodic Law; Thermochemistry; Electrochemistry; Photochemistry.
   Monday at 3 p.m. (Second Term).

7. History of Chemistry.

   Tuesday at 3 p.m. (Second Term).

8. Quantitative Analysis.

   The minimum amount of work is comprised in Nos. 1, 2, 3, 4, 5, 6, 7, 8, 13 of Bolton's Quantitative Analysis.
   Lectures on Thursday at 3 p.m. during part of the Session.

9. Assaying. (See p. 99).

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*This option is for students who intend to take a course in Medicine.

Books:

Walker's Physical Chemistry (Macmillan & Co.)
Ostwald's General Chemistry (Macmillan & Co.)
Meyer's Modern Theories of Chemistry.
Von Meyer's History of Chemistry (Macmillian & Co.)
Rodwell's Birth of Chemistry (Macmillian & Co.)
Bolton's Quantitative Analysis (J. Wiley & Sons).
Leffman & Beam's Water Analysis.

For Extra-Mural Students.

Tutors are appointed to give assistance by correspondence to Extra-mural students taking classes in Chemistry, Mineralogy and Geology. The tutorial fee for any one of the three subjects is $5; and for more than one, $10. The fees are to be paid by all the Extra-mural students taking these subjects. Assistance is given in both the practical and theoretical parts of the subject.

Extra-mural students are required to do promptly the work set by the Tutor, and will not be admitted to examination until this work is completed.

JUNIOR.

Books to be Read:

Remsen's Inorganic Chemistry (Advanced).
Goodwin's Chemistry (with Supplement as far as Section 6), but from Section 247 to Section 437 the examination will include only those sections marked *General Characters*. Students are, however, recommended to read the sections not so marked. Only the commoner compounds described in Chapters XIII and XIV need be studied.
Waddell's Arithmetic of Chemistry (Macmillan & Co.), Chapters I-V.

SENIOR.

Books to be Read:

Goodwin's Chemistry, Chapters XIII, XIV, XVII, XVIII, XIX, XX and XXI, and sections 238-437 and Supplement.
Van Deventer's Physical Chemistry, (J. Wiley & Son).
Waddell's Arithmetic of Chemistry, Chap. VI to end.

For Students in Medicine.

First Year.

Monday, Tuesday and Wednesday, at 11:00 a.m.

The Lectures and Laboratory practice of the Junior Arts Class.

Second Year.

Thursday and Friday at 11:00 a.m.
First Term.—Organic Chemistry (Senior Arts Class).
First and Second Term.—Physiological Chemistry (Dr. Wood).
Second Term.—Chemistry of Metals (Senior Arts Class). Optional.

Analytical Chemistry.

N.B.—Before taking this class students must pass the examination in Junior Chemistry.

First Term.—Monday, Tuesday and Wednesday at 11:00 a.m.
Systematic Testing of Chemical Substances.
Use of the Blowpipe.
Chemical Toxicology.
Second Term.—Monday, Tuesday and Wednesday at 11:00 a.m.
Urinalysis.
Physiological Chemistry.
Analysis of Milk and Water.

Books for Consultation:

Goodwin's Chemistry (with Supplement).
Attfield's Chemistry.
Bernthsen's Organic Chemistry, translated by George McGowan, Ph.D.
Halliburton's Chemical Physiology.
The Urine, the Common Poisons and the Milk, by Professor J. W. Holland.
Leffman & Beam's Water Analysis.

Junior, Senior and Preliminary Honours of the Arts course cover all the Chemistry required of students of Medicine.

MINERALOGY.

PROFESSOR.—WM. NICOL, M.A.

DEMONSTRATOR.—A. G. Burrows, M.A.

Students in Mineralogy are expected to take part in the field excursions, held during the fall term. The cost of the field work will not exceed five dollars.

Pass and Preliminary Honours may be taken in one year by students in Honours.

Divisions one and two of Pass Class are required of students in Geology.

Students intending to take Mineralogy are advised to take Junior Chemistry, Junior Physics and the lectures on crystallography before commencing it.

In addition to essays and correspondence, extra mural students are required to determine and describe the minerals in collections furnished by the demonstrator.

Examinations are held only at the University.

Pass.

1. Elementary Mineralogy.
2. Description and determination of the following minerals:
   Graphite, native silver, native gold, native copper, stibnite, molybdenite, galenite, chalcocite, sphalerite, niccolite, pyrrhotite, bornite, chalcopyrite pyrite, arsenopyrite halite, fluorite, quartz and prin. vars, corundum, hæmatite, magnetite, chromite, pyrolusite, limonite, calcite, dolomite, siderite, orthoclase, plagioclase pyroxene and vars, olivine, amphibole and vars, garnet, tourmaline, stilbite, muscovite, biotite serpentine, talc, sphene, apatite barite, celestite, gypsum, coal and vars.

Text-Books: Dana's Minerals and How to Study Them 2nd Ed. (Wiley and Sons).
Crosby's Tables for the determination of Common Minerals.

3. Elementary Crystallography.
   A course of fifteen lectures delivered at the opening of the session, at 8 o'clock a.m. on Mondays, Tuesdays, Wednesdays and Fridays.

Text-Book: Williams' Crystallography, (Henry Holt & Co.)

4. Blowpipe Analysis—(*a*) A course of practical demonstrations to illustrate and explain the reactions in studying the chemical properties of minerals (one hour per week). (*b*) A practical class in which the experiments seen in the lectures are performed by the students (one hour per week).

Text Book: Chapman's Blowpipe Practice, 2nd Ed. (Copp, Clark Co., 1893).

Books for Reference:

Cornwall's Translation of Plattner's Manual of Qualitative and Quantitative Analysis with the Blowpipe, 7th Ed. (Van Nostrand Co).
Brush and Penfield's Manual of Determinative Mineralogy and Blowpipe Analysis, 1899.
Cornwall's Manual of Blowpipe Analysis, (Van Nostrand Co).
Landauer's Blowpipe Analysis.
Endlich's Manual of Qualitative Blowpipe Analysis.

Moses & Parsons' Mineralogy, Crystallography, and Blowpipe Analysis, 2nd Ed.

Students must supply their own blowpipe apparatus.

HONOURS.

Preliminary.

(May be taken as a Pass Class).

1. Systematic Mineralogy illustrated by specimens, charts, lantern-slides, etc.

Text-Book: Dana's Text-book of Mineralogy, 1899, (Wiley & Sons).

Books for Reference:

Naumann-Zirkel's *Mineralogie.*
Tschermak's *Mineralogie.*

2 Practical Crystallography.
Practical study of crystal forms by means of crystals, and wire and wooden models.

Text-Book: Williams' Crystallography. (Henry Holt & Co).

3. Qualitative Analysis of minerals by blowpipe and wet reagents:—The course in Qualitative Analysis in connection with Preliminary Honour Chemistry and, in addition, the Analysis of selected minerals samples to be secured by the students individually from the Professor.
Lectures on Qualitative Analysis.

Text-Book: Fresenius' Qualitative Analysis.

Books for Referance:

Ostwald's Foundations of Analytical Chemistry (Macmillan & Co).
Menschutkin's Analytical Chemistry, (Macmillan & Co.)

4. Essays on prescribed subjects.

Final.

1. Descriptive Mineralogy.
Description and classification of the commonly occurring minerals, special attention being given to Canadian ores and rock-forming minerals.

Text-Book: Dana's System of Mineralogy, 6th Ed. (Wiley & Son).

Books for Reference:

Chapman's Minerals and Geology of Ontario and Quebec, 3rd Ed. (Copp Clark Co).
Commissioners' Report on Mineral Resources of Ontario, 1890.
Reports of Bureau of Mines, 1891, 1900.

Reports of Geological Survey.
English's Catalogue of Minerals.

2. Determinative Mineralogy.
Practical instruction in the determination of minerals by means of the blowpipe and by field tests.
Examination of specimens from cabinets.

Text-Books: Brush & Penfield's Manual of Determinative Mineralogy and Blow-pipe Analysis (1899).
Crosby's Tables for the Determination of Common Minerals.

3. Quantitative Analysis of Minerals (selected samples).

Text-Book: Fresenius' Quantitative Analysis.
Lectures on Quantitative Analysis.

4. Economic Geology. (See under *Geology*).

5. Petrography. (See under *Geology*).

6. The use of heavy solutions in separating minerals for rock-analysis.

7. Assaying.
The assaying of gold, silver, iron copper, lead, zinc, and nickel ores, by furnace, wet, and electrolytic methods.

Text-Books: Chapman's Assay Notes, 2nd Ed. (Copp Clark Co).
Brown's Manual ot Assaying, 7th Ed. (Sargent & Co).
Blair's Chemical Analysis of Iron, 3rd Ed. (J. B. Lippincott Co).
Rickett's and Miller's Notes on Assaying. (Wiley & Sons).
Miller's Manual of Assaying. (Wiley & Sons).

Books for Reference:

Beringer's Text-book on Assaying. (C. Griffin & Co).
Bodeman & Kerl's Assaying.
Furman's Manual of Practical Assaying. (Wiley & Sons).

8. Use of Reflecting Goniometer.

9. A course of lectures on economic mineralogy. These lectures will be illustrated by lantern slides and will be delivered at hours convenient for the class.

10. Essays to be handed in as follows:—
Oct. 28th, 1901.—"Graphite and its Uses."
Nov. 25th, 1901.—"Gold in Ontario."
Dec. 20th, 1901.—"The Silver Ores of Canada."
Jan. 31st, 1902.—"The Sulphide Ores of Nickle."
Feb. 28th, 1902.—"Talc and its Uses."
Mar. 31st, 1902.—"Canadian Minerals used as Gems."

GEOLOGY.

PROFESSOR.—Willet G. Miller, B.A,
DEMONSTRATOR.—M. B. Baker, B.A.

Students taking work in this department have access to the museums of Queen's University and the School of Mining.

The petrographical laboratory is supplied with electric power, diamond saws and other apparatus required in the preparation of thin sections of rocks and minerals for examination under the microscope.

The microscope room is provided with several instruments of the latest and most approved designs.

A corresponding tutor has been appointed to communicate with extra-mural students.

Pass.

(Students taking Geology are advised to take Mineralogy I).

The following themes will be treated of in the lectures: The planetary relations of the earth; the atmosphere; water; solid crust; probable nature of the earth's interior; rocks, their general megascopic and microscopic characters and classification; volcanic action; earthquakes; upheavel; subsidence; geological effects produced by heat, air, water and life; bosses; dykes; veins; stratification; dip; strike; anticline and syncline; faults; foliation; nature and uses of fossils; stratigraphical geology; outline of geological history; economic geology, etc.

The lectures are illustrated by means of maps, diagrams, and lantern views.

The labratory work will consist of the examination of typical specimens of the different groups of fossil plants and animals, and of hand specimens of the more common rocks.

During the months of October and November excursions will be made to places of geological interest in the vicinity of Kingston. All students are expected to join these excursions. The cost will not exceed five dollars.

Essays are required on prescribed subjects.

Students are expected to provide themselves with some elementary book on the subject. W. B. Scott's "Introduction to Geology," (the Macmillian Co., price $1.90) is recommended.

Books for Reference:

Dana's Manual of Geology.
Le Conte's Elements of Geology.
Chapman's Minerals and Geology of Central Canada.
Kemp's Handbook of Rocks.

Extra-mural students are advised to read Le Conte's Elements of Geology (last edition), or Geikie's Text-book of Geology. They will also be required to write essays on prescribed subjects.

Students who are not taking Mineralogy are advised to pay particular attention to Chapter I of Scott's Geology, and to provide themselves with a collection of the principal rock-forming minerals.

HONOURS.

Preliminary.

(May be taken as a Pass Class).

(Students taking First Honour Geology are required to take or to have taken Crystallography in Senior Chemistry).

Lectures on:

Physical Geography, Petrography and Palæontology.

The laboratory work will consist of the preparation of thin sections of minerals and rocks and their microscopic determination.

The museum work will consist of the magascopic determination of rocks and the naming and classification of Canadian fossils.

Field work. Essays are required on prescribed subjects. Candidates will also be examined on the following:

Page's or Geike's Physical Geography.
Chapman's Minerals and Geology of Central Canada, Part IV.

Dana's Manual of Geology.
Luquer's Minerals in Rock Sections.
Kemp's Hand-book of Rocks.

Books for Reference:
Wood's Elementary Palæontology.
Harker's Petrology for Students.
Dana's Text-book of Mineralogy.
Cole's Aids in Practical Geology.

Students are advised to devote as much time as possible to field work during the preceding long vacation, and to collect material for study in the laboratory during the winter. Opportunities will be offered advanced students for engaging in field work during the summer vacation.

Final.

Lectures on:
Petrography.
Palæontology.
Geology of Canada.
Geology in its relations to Mining and Agriculture.
Construction of Geological Maps and Sections.
Laboratory, Museum and Field work.

Candidates will also be examined on the following:
Geike's Text-book of Geology.
Geike's Field Geology.
Chapman's Minerals and Geology of Central Canada, Parts IV and V.
Dawson's Hand-book of Canadian Geology.
Geike's Founders of Geology.
Branner & Newsom's Syllabus of Economic Geology.
Kemp's Ore Deposits of the United States.

Books of Reference:
Rosenbusch's Microscopical Physiography of Rock-Forming Minerals.
Zirkel's *Petrographie* Vols. I, II, and III.
Harker's Petrology for Students.
Nicholson's Palæontology.
Dawson's Ice Age in Canada.
Wright's Ice Age in North America.
Phillips' Ore Deposits.
Williams' Geological Biology.

Students are advised not to undertake the work in Final Honour Geology until they have acquired a suf-

ficient knowledge of Chemistry and Mineralogy. They should be prepared to devote a large part of their time to the subject throughout the session. Each member of the class will be encouraged to undertake reseach work, for which the surrounding district offers exceptional opportunities.

ART. XI—POST-GRADUATE DEGREES.

Doctor of Laws (LL.D.)

This degree is honourary, and is awarded for literary, scientific or professional distinction.

DEGREE OF DOCTOR OF PHILOSOPHY (Ph.D.) AND DOCTOR OF SCIENCE (D.Sc.)

1. Candidates for these degrees must have previously taken the Degree of M.A. in the subjects they propose to offer, or must satisfy the Senate of their ability to proceed with the course.

2. Neither of these degrees can be obtained in less than four years from the date of graduation as M.A.

3. Candidates must give notice in writing to the Senate of the course they intend to take, at least two years before they present themselves for examination.

4. All candidates must submit a thesis on some subject connected with their special course, embodying the results of original investigation.

I. Degree of Ph. D.

1. Course for Degree of Ph.D. in Classics.

Candidates for the Degree of Ph. D. in Classics will be examined on :

(*a*) The General History of Greece.
(*b*) The General History of Rome.
(*c*) A special period of Greek History to be studied in detail, mainly from original authorities.
(*d*) A special period of Roman History to be studied in detail, mainly from original authorities.
(*e*) Plato *Republic* and Aristotle *Nicomachean Ethics.*
(*f*) Aristotle Politics.

The period of Greek History selected is, *Greek History to the close of the Peloponnesian War.*

Original Authorities.

Heredotus.
Thucydides.
Xenophon *Hellenica*, I and II.

The period of Roman History selected is *Roman History from the Gracchi to the death of Vespasian.*

Original Authorities.

Plutarch *Lives of the Gracchi.*
Cicero *Letters.*
Tacitus' *Annals*, B. I-IV.
Suetonius *Augustus.*

Candidates must show acquaintance with modern authorities on Greek and Roman History, and with the best modern critics of Plato and Aristotle. They are expected to be familiar with the substance of the books prescribed, as well as to be able to translate them.

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2. Course for the Degree of Ph. D. in English and Modern Literature.

(*a*) English Language and Literature.

Candidates in this course will communicate with Professor Cappon on the subject.

(*b*) Modern Languages.

I.

1. The history of the literature.
2. The history of the language.
3. Oral and written composition.

II. German.

1. Gothic.
   Old High German.
   Middle High German.
2. Eighteenth Century.
3. Nineteenth Century.

III. French.

1. From the origin to the beginning of the 15th century.
2. Seventeenth Century.

3. Eighteenth Century.
4. Nineteenth Century.

IV. Italian or Spanish.

V. Comparitive Grammar of the Romance Languages.

Candidates may omit Period 2 or 3 in German and 2, 3 or 4 in French.

For special authors and works in each period and books of reference see Calendar for year 1896-97, or consult the Professor.

Candidates are requested to put themselves in communication with the Professors, who will prescribe the authorities to be consulted.

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3. Course for the Degree of Ph.D. in History and English Literature.

(*a*) History.

1. The History of England.
   Continuous Constitutional History.
   Continuous Political History.
   A Selected Period to be studied in detail from the original authorities.
2. A period of general history to be studied in detail from original authorities.
3. The literature of the special periods selected.

The books on the constitutional history of England to be studied are :—

Stubb's Constitutional History and Select Charters.
Hallam's Constitutional History.
May's Constitutional History.

Periods for detailed study :

English History.	General History.
449-1066.	493-1095.
1066-1272.	1095-1273.
1272-1485.	1273-1530.
1485-1603.	1530-1648.
1603-1714.	1648-1788.
1714-1880.	1788-1880.

Candidates are required to take the special periods most nearly corresponding with each other in English and general history, and in studying the selected periods they are expected to make themselves acquainted with their social and literary history.

Candidates are requested to put themselves in communication with the Professor, who will prescribe the authorities to be consulted.

(*b*) English Literature. For subjects, see Course 2.

4. Course for the Degree of Ph.D. in History and Modern Literature.

(*a*) History. For subjects, see Course 3.
(*b*) Modern Literature. For subjects, see Course 2.

5. Course for the Degree of Ph.D. in English Literature and Political Science.

(*a*) English Literature. For subjects, see Course 2.
(*b*) Political Science. Subjects on application.

6. Course for the Degree of Ph. D. in History and Political Science.

(*a*) History. For subjects, see Course 3.
(*b*) Political Science. Subjects on application.

7. Course for the Degree of Ph.D. in Mental and Moral Philosophy.

(A) Philosophical Systems.

Candidates may offer either one or two of the following:—

1. The Philosophy of Plato, with special reference to the Theaetetus, Republic and Sophist. Ability to translate these Dialogues is presumed.

2. The Philosophy of Aristotle, with special reference to the Organon (Selections of Oxford Press), De Anima, Nicomachean Ethics and Politics. Ability to translate these books is presumed.

3. The Philosophy of Hegel, with special reference to the Encyklopadie, I and III, Wissenschaft der Logik, I and III, Phanomenologie des Geistes, pp. 1-168, and Philosophie des Rechts.

4. The Philosophy of Comte, as contained in the Cours de Philosophie Positive and System of Postive Polity.

5. The Philosphies of Schopenhauer, Hartmann and Lotze, with special reference to Schopenhauer's World as Will and Idea, Hartmann's Philosophy of the Uncon scious, and Lotze's Microcosmus and system of Phil-osophy.

6. English Empirical Philosophy, as represented by James Mill's Analysis of the Human Mind, J. S. Mill's Logic, Examination of Hamilton and Utilitarianism, Bain's Senses and Intellect, Emotion and Will, Herbert Spencer's First Principles, Psychology and Data of Ethics.

Acquaintance with the best recent criticism is in all cases required.

B. Principles of Philosophy.

Candidates must profess one of the following branches of Philosophy, unless they have taken two subjects in section A.

1. The Principles of Logic. References: The logical treatises of Hegel, Mills, Jevons, Venn, Lotze, Bradley, and Bosanquet.

2. The Principles of Psychology. References: The Psychological works of James Mill, J. S. Mill, Bain, Wundt, Sully, Ladd, James, and Lotze.

3. The Principles of Ethics. References: The ethical works of J. S. Mill, Bain, Sidgwick, Green, Bradley, Spencer, Stephen, and Martineau.

4. The Principles of Æsthetics. References: The æsthetic treatises of Aristotle, Kant, Schiller, Lessing, Hegel, Lotze, Schasler, and Ruskin.

5. The Principles of Political Science. References: See Honour work in Political Science for Degree of M.A.

II. Degree of D. Sc.

1, Course for the Degree of D.Sc. in Prue and Applied Mathematics.

Candidates for this degree must take first-class honours in Pure Mathematics and first-class honours in Physics.

They must, in addition, show an intimate knowledge of at least one subject from each of the following groups:

1. { Modern Synthetic Geometry.
   { Higher Algebra.
2. { Dynamical Theory of Heat.
   { Dynamical Theory of Electricity.

The titles of books bearing on the foregoing subjects can be obtained by communicating with the Professors.

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2. Course for the Degree of D.Sc. in Chemistry, Mineralogy, Botany and Geology.

Candidates are required to have a thorough knowledge, practical and theoretical, of the subjects in one of the following divisions:

1. Chemistry—one of the following groups:
   - A. Inorganic Chemistry.
     Chemistry in its relations to Mineralogy.
     Inorganic Analysis and Assaying.
   - B. Organic Chemistry.
     Chemistry in its relations to Biology.
     Organic Analysis.

FACULTY OF THEOLOGY.

(1) *General Announcement.*

1. The course in Theology extends over three sessions of six months each.

2. A student who desires to enter upon the study of Theology must be a graduate of this University, or of a Uuiversity whose degrees are recognized by the Senate; or he must have completed three years of a university course, as enjoined by the General Assembly.

3. Students are expected to have passed the Junior Hebrew class, and are recommended to take a full course in Arts, and to obtain a degree, before entering on the study of Theology.

4. Students on entering theology, or on intimating their purpose to study for the ministry, must be in full communion with the Church; and all such students are required, during their course, to be in communion with a congregation of the Church in Kingston.

5. At the beginning of each session every student must present a certificate to the Secretary of the Faculty from the Presbytery within whose bounds he has resided during the summer vacation; and at the close of each session he shall, at the earliest opportunity, present his certificates to the Presbytery within whose bounds he purposes to reside.

6. Testamurs in Theology are given to students who have passed the sessional examinations on all the subjects prescribed by the General Assembly for students for the ministry.

7. Pass and B.D. examinations are held annually in April and October.

8. For further information see Blue Book of the Church, or apply to Rev. Dr. Ross, Secretary of the Faculty.

(*2*) *Matriculation.*

Matriculation examinations begin on Monday, Oct. 29th. Candidates must give notice to the Secretary of the Faculty before Oct. 22nd.

Subjects of Examination :

Examination papers will be set in the following departments :—

1. The Shorter Catechism and the contents of the Epistle to Galatians and Romans.
2. Acts I-XII, in Greek, and Dods' Introduction pp. 1-75.
3. Kirkpatrick's Divine Library of the O.T. Hebrew, The Article, Pronouns, Inseparable Particles, Grammatical Analysis, Gen. I, 1-20; Ps. I, I Sam. ix.
4. Bartlet's Early Church History pp. 1-66, and the Acts in the R.V.

One paper will be set in each department.

Subjects of Study.

I.—DIVINITY.

PROFESSOR.—Very Rev. G. M. Grant, M.A., D.D , LL.D.

Lectures will be given on :

Comparative Religion.
Revelation.
The Canonicity, Authenticity, Genuineness and Credibility of the Biblical Records.
The Inspiration and Authority of the Scriptures.
Systematic Theology.
The Pastoral office and Homiletics.

II.—HEBREW.

PROFESSOR.—Rev. W. G. Jordan, B.A., D.D.

Junior Hebrew.

Davidson's Hebrew Grammar, the first twenty exercises.
Psalm I, Genesis I, I Samuel IX-XI.

Senior Hebrew.

Davidson's Grammar, exercises in paragraphs 23 to 38 inclusive.
Hebrew Syntax—The Class Lectures. Haggai, Malachi, Zechariah I-VIII.

Honour Course in O.T. Criticism:

The History of Hexateuch criticism.
Hebrew, Gen. I-III, Job VI-XII.
Exercises in Davidson's Grammar, 38 to the end.
Syntax, The Hebrew tenses.

III.—APOLOGETICS.

PROFESSOR.—Rev. D. Ross, M.A., B.D., D.D.

1. Lectures on Apologetics from the beginning of the 16th century.
2. Lectures on Historical and Philosophical Apologetics.
3. Examination of Bruce's Apologetics, Book III.

IV.—BIBLICAL CRITICISM.

PROFESSOR.—Rev W. G. Jordan, B.A., D.D.

1. O.T. Exegesis and Criticism.

The Book of Job.
The Prophecy of Joel.
The History of Israelitish Religion.

2. N.T. Exegesis and Criticism.

PROFESSOR.—Rev. D. Ross, M.A., B.D., D.D.

The Four Gospels. I Peter.
Lectures on Introduction and Criticism.

V.—CHURCH HISTORY AND HISTORY OF DOGMA.

PROFESSOR.—Rev. S. McComb, M.A.

Lectures on Eusebius' Ecclesiastical History.
Lectures on History of the Doctrine of the Incarnation.

HONOUR COURSE.

Lectures on Gwatkin's Selections from early writers.
Lectures on Almselm's Cur Deus Homo.

VI.—ENGLISH BIBLE.

The class in this subject will be held on Friday, open to students in all faculties, and to the general public.

Books to be read in 1901-2: Isaiah XL—LXVI; Acts and Mark.

For Matriculation and Sessional Scholarships, see Article IV page 44.

The Church requires the following discourses to be delivered during the course:—Homily, Lecture and Greek Critical Exercise, Sermon and Hebrew Critical Exercise.

Pass Examination.

On the work of the Session.

Degree of Bachelor of Divinity.

REGULATIONS.

1. Candidates for the Degree of Bachelor of Divinity, (B.D.), must be graduates in Arts of this University, or of a University whose degrees are recognized by the Senate, and must follow the prescribed order of classes in Theology.

2. The degree shall not be conferred until the candidate has completed the theological curriculum, with a view to the ministry in the church to which he belongs, and has passed a satisfactory examination in the branches of Theology taught in the University.

3. The divisions of the examination shall be (1) The Holy Scriptures. Candidates will be expected to show a competent knowledge of the contents of the Old and New Testaments, and to show special acquaintance with at least one book from the O. T. and one from the N. T. The Revised Version should be used. This division is compulsory on all candidates. Any two of the following may be taken in addition. (2) O. T. Criticism and Introduction, Hebrew and Aramaic. (3) N. T. Criticism,

Exegesis and Introduction. (4) Systematic Theology. (5) Church History and History of Dogma. (6) Apologetics and Comparative Religion.

Two papers will be set in (1) and four papers in each of the other divisions.

4. Candidates who have completed the Theological course may be examined in all the subjects, or may defer their examination in any subject.

5. Students may be admitted to examination in only one division at the end of the second session of their theological course.

6. A candidate may, subject to the preceding regulations, appear at any University examinations in Theology provided he gives two weeks notice of his intention to the Registrar, and pays the examination fee.

Autumn examinations begin on Tuesday, Oct. 29th. Candidates must give notice to the Secretary of the Faculty before Oct. 15th.

Subjects of Examination:

I. The Holy Scriptures. The contents of the Old and New Testaments generally, with a special knowledge of Isaiah and St. Mark, in the Revised Version.

Books recommended:

Bennett's Primer of the Bible, or Kautzsch's Outlines of O.T. Literature.

Driver's Isaiah.

St. Mark in Cambridge Bible Series.

II. Hebrew and Aramaic. O. T. Introduction and Criticism.

(*a*) The Study of the Hexateuch, its History and Methods.

(*b*) Theology and Exegesis. Joel, Job, VI-XII; Gen. I-III.

(*c*) *Aramaic.* The Book of Daniel with special reference to Chapters III-V.

There are two papers in division (*b*) and one each in (*a*) and (*c*).

Books to be consulted:

Driver's Introduction, Bacon's Genesis of Genesis, Driver's Deuteronomy, Davidson's Job, Driver's Amos and Joel, Cornill's History of Israel, Dillmann's Genesis, The Oxford Hexateuch, Kirkpatrick's Psalms in Cambridge Bible Series, Bradley's Lectures on Job, Driver's Daniel.

III. N. T. Criticism, Exegesis and Introduction.

(*a*) 1. Canonics.
Westcott, History of the Canon of the N.T.
Charteris, Canonicity.
2. Textual Criticism, MSS. Versions and principal disputed passages.
Scrievner's Introduction to the criticism of the N.T.
Wescott and Hort, Greek N.T. Introduction.

(*b*) Introduction, Salmon, Weiss, Gloag, Sanday & Headlam's Com. on Rom. pp. I-XLIV; Wescott's Com. on Heb. pp. XXVIII-LXXX.

(*c*) Exegesis. Epp. to Romans and Hebrews.
Commentaries: Sanday & Headlam, Gifford, Godet, Calvin on Romans, Westcott on Hebrews.

(*d*) N. T. Greek. Blass' Grammar, Burton's Syntax of the Moods and Tenses.

IV. Systematic Theology.

(*a*) The Christian Conception of God; Caird's Fundamental Ideas of Christianity, Clarke's Outlines, Lux Mundi.

(*b*) The Christian Doctrine of Sin; Tulloch, Muller Vol. I.

(*c*) The Atonement; McLeod, Campbell, and Dale, Cur Deus Homo, 1st half.

(*d*) The Church; Hatch's Early Organization, Hort's Ecclesia.

V. Church History and History of Dogma.

(*a*) Church History, Ante-Nicene Period; Gwatkin's selections from Early Christian writers.

(*b*) History of Dogma; The doctrine of the Incarnation, Anselm's Cur Deus Homo, 2nd half.

Books to be Consulted:

Neander's Church History, Vols. I, II., Ramsay's Church in the Roman Empire before A.D. 170, part II; Dorner's Doctrine of the Person of Christ, Vol. I.; Forrest's Christ of History and Experience; Hooker's Laws of Ecclesiastical Polity, Book V, sections 50-57.

VI. Apologetics and Comparative Religion.

(*a*) Philosophical and Historical.
Flint: Theism, Antitheistic Theories.
Pfleiderer: Philosophy and Development of Religion.
Bruce: Apologetics.

(*b*) Comparative Religion.
Grant: The Religions of the World.
Tiele: Outlines of the History of Religion,
Pressense: The Ancient World and Christianity.

Benefactors have placed at the disposal of the Principal a few nominations, exempting from payment of class fees throughout the Course in Arts, for intending students of theology who have matriculated. Applications for these should be made to him or to the Registrar before October 1st.

FACULTY OF MEDICINE.

The degree of Doctor of Medicine (M.D.) is conferred upon candidates who comply with the following regulations:

1. Except as provided in the next regulation, every candidate must pass a successful examination upon the following subjects:

English Language, Grammar and Composition.
Arithmetic.
Algebra, to the end of Simple Equations.
Geometry, First two books of Euclid.
Latin, as in Arts matriculation, or a full equivalent.
Options, one of which must be taken: Steward's Physics, or one book in Grcek, French or German.

2. Matriculants in Arts, graduates from a recognized University, and students who have passed the Matriculation examination of the College of Physicians and Surgeons of Ontario, or of Quebec are not required to pass the above examination.

NOTE.—Candidates who intend to practice in Ontario, or who wish to register with the General Medical Council of Great Britain and Ireland, must pass the Matriculation of the College of Physicians and Surgeons of Ontario, that is, the Depatmental Arts Matriculation, with the Chemistry and Physics Option.

3. Candidates who are not graduates in Arts must furnish evidence of having attended some recognized Medical School for not less than four full winter sessions and one summer session, and must pass all the required examinations.

EQUIVALENT EXAMINATIONS.

The following courses and examination in Arts (attendance compulsory) will be accepted in Medicine :—

Faculty of Arts.	*Faculty of Medicine.*
1. Course and examination in Botany (Pass).	1. Course and examination in Botany.
2. Honour Course and examination in Pass Animal Biology.	2. Course and examination in first year Physiology.
3. Honour Course and examination in Preliminary Honour Animal Biology, including Histology.	3. Course and examination in 2nd year Phisiology and Histology.
4. Course and examination in Junior Chemistry.	4. Course of 1st year Chemistry. (See Calendar).
5. Course and examination in Senior Chemistry.	5. Course and examination in 2nd year Chemistry.
6. Course and examination in Preliminary Honours in Chemistry.	6. Course and examination in Analytical Chemistry.

For information regarding the Medals, Scholarships and Prizes see pages 49 and 50.

NOTICES.

1. The examinations of the Medical Council are held in the City of Kingston.

2. The Calendar of the Medical Faculty, with full information respecting the curriculum in Medicine, fees, etc., can be had by applying to Dr. Herald, the Secretary of the Faculty.

3. The fee, including Registration, Examination, Laboratories, Library, Gymnasium, and the required amount of dissection material is $100 per session, but if paid in full before October 31st the fee is $90. If paid before January 10th, $95. Special arrangements will be made as to fees with those who do not take the full course of any year.

4. Candidates who are graduates in Arts will be required to attend only three winter sessions and one summer session.

5. All candidates must furnish evidence of having had six months' experience in dispensing medicines in a physician's office.

6. Students in Arts who intend subsequently to study Medicine are advised to take the honour classes in Chemistry and Animal Biology and thus complete their Chemistry, Physiology and Histology during the under-graduate course in Arts.

Examinations are required at the end of every session as follows:

At the end of the first session :—

Physics, Anatomy, Bones, Muscles and Ligaments, Animal Biology and Physiology, Theoretical Chemistry.

At the end of the second session :

Anatomy, Physiology, Histology, Materia Medica, Chemistry, Theoretical and Analytical.

At the of the third session :

Practice of Medicine, Surgery, Obstetrics and Gynæcology, Pathology, Jurisprudence, Materia Medica, Theraputics and Pharmacy, Medical and Surgical Anatomy.

At the end of the summer session:

Botany and Sanitary Science.

At the end of the fourth session:

Practice of Medicine, Surgery, Obstetrics and Gynæcology, Medical and Surgical Anatomy, Sanitary Science, Pathology and Bacteriology.

On each paper the examiner will put pass and honour questions. Students desiring rank must answer both.

A candidate cannot obtain University rank for any of the foregoing examingtions until he has matriculated.

FACULTY OF LAW. DEGREE OF LL.B.

1. This degree will not be conferred upon any undergraduate or upon any graduate in Arts of less than one year's standing.

2. Graduates who have taken the honour courses of this University in History and Political Science may proceed to the degree by passing on the following woks:—

Commentaries of Gaius, Abdy and Walker.
Institutes of Justinian. Sandars.
Harris's Principles of Criminal Law. Also Canadian Criminal Code, with Amendments.
Maxwell's Interpretation of Statutes. Also Interpretation Acts, in Revised Statutes of Canada and Ontario.
Westlake's Private International Law.
T. A. Walker's International Law.
Gutherie's Savigny.
O. W. Holmes' The Common Law.
Goodnow's Comparative Adminstrative Law.
Dicey's Law of the Constitution.
Houston's Cosntitutional Documents of Canada.

3. Barristers at Law or persons who have been admitted as students-at-law by the Law Society of Upper Canada and have passed their second Intermediate Examination will be admitted to the degree by passing on the honour course of this University in History and Political Science, together with the works specified in section 2.

4. Graduates in Arts of this or any recognized University, being Barristers-at-law will be admitted to the degree by passing on the following works in addition to those specified in section 2:—

Bryce's American Commonwealth, Vol. I.
Stubb's Constitutional History of England.
Bagehot's English Constitution.
Bosanquet's Philosophical Theory of the State.
Holland's Elements of Jurisprudence.
Maine's Ancient Law.

5. Candidates are required to send notice to the Registrar, before the first day of March, of their intention to present themselves at any of the examinations.

FACULTY OF PRACTICAL SCIENCE.

The object of the Faculty is to give a theoretical and practical education in applied science.

The complete course extends over four years, and leads to the degree of B.Sc., but a diploma will be awarded to those who complete three years of the course and pass the necessary examinations.

Admission.

A candidate may enter upon a course with a view to obtaining a diploma or the degree of B.Sc. upon any one of the following conditions :—

1. Having matriculated in any university in the British Empire or in the United States.

2. Having passed the Junior Leaving Examination of the Department of Education of Ontario, in English Grammar, Composition and Literature, Arithmetic Mensuration, Algebra and Geometry, History of Great Britain and Canada, Physics and Chemistry.

3. Having been engaged for one year in engineering or surveying, or a manufacturing establishment, and having passed the October examination in (*a*) arithmetic, (*b*) algebra to quadratic equations inclusive, (*c*) the first three books of Euclid or their equivalent in any other work on Geometry, and (*d*) English composition and dictation.

While students are admitted upon matriculating in the subjects mentioned, it is strongly urged upon them to take the complete matriculation examination with the modern language end science option. (See page 29).

As a good grounding in Mathematics is necessary, it will be found advantageous to have attained the Senior Leaving standard in that subject before entering.

Special students may be admitted to such course of instruction as the Faculty may think proper.

The work will be carried on partly in the University buildings and partly in the Mining School.

The courses are classified under three following groups :

Group I.

(A.) Mining Engineering (B.Sc. and M.E.)
(B.) Chemistry and Mineralogy (B.Sc.)
(C.) Mineralogy and Geology (B.Sc.)

(*A*) *Mining Engineering.*

The degree of Bachelor of Science (B.Sc.) is awarded on the completion of the following course, and the production of certificates for not less than three months' work in a mine or mines. The degree of Mining Engineer (M.E.) is awarded in addition, on the production of certificates of not less than one year's experience in actual mining. These certificates must be signed by mine managers, and must state the character of the work done by the candidate.

FIRST YEAR.

First Term.	*Second Term.*
Junior Mathematics.	Junior Mathematics.
Junior English.	Junior English.
Junior Physics.	Junior Physics.
Junior Chemistry.	Junior Chemistry.
Drawing.	Descriptive Astronomy.
Elementary Mineralogy and Blowpipe Analysis.	Drawing.
Surveying.	Elementary Mineralogy and Blowpipe Analysis.
Workshop.	Qualitative Analysis.
	Workshop.

Optional subjects : Junior French or Junior German.

SECOND YEAR.

First Term.	*Second Term.*
Senior Mathematics.	Senior Mathematics.
Senior Physics.	Senior Physics.
Senior Chemistry.	Senior Chemistry.
Applied Mechanics.	Quantitative Analysis.
Qual. Analysis of Minerals.	Applied Mechanics.
Systematic Mineralogy.	Systematic Mineralogy.
Geology.	Geology.
General Engineering.	General Engineering.
Drawing and Designing.	Drawing and Designing.
Workshop.	Workshop.
Surveying.	

THIRD YEAR.

First Term.	*Second Term.*
Co-ordinate Geometry.	Co-ordinate Geometry.
Elementary Differential and Integral Calculus.	Elementary Differential and Integral Calculus.
Spherical Trigonometry.	Practical Astronomy.
Descriptive Mineralogy.	Technical Chemistry.
Determinative Mineralogy.	Descriptive Mineralogy.
Geology and Petrography.	Determinative Mineralogy.
Assaying.	Geology and Petrography.
Mining.	Assaying.
Ore Dressing.	Economic Geology.
Metallurgy.	Mining.
Surveying.	Ore Dressing.
Civil Engineering.	Metallurgy.
Elementary Electrical Engineering.	Milling.
	Heat (Steam Engine).

FOURTH YEAR.

First Term.	*Second Term.*
Metallurgy.	Metallurgy.
Mechanism.	Mechanism.
Materials, Constrnction and Design.	Materials, Construction and Design.
Mining Engineering.	Mining Engineering.
Milling.	Milling.
Mining Law.	Mining Law.

(*B*) *Chemistry and Mineralogy.*

The degree of Bachelor of Science (B.Sc.) is conferred upon candidates who complete the following course. A

diploma of the School of Mining is granted on the completion of the first three years of the course :

FIRST YEAR.

First Term.	*Second Term.*
Junior Mathematics.	Junior Mathematics.
Junior English.	Junior English.
Junior Physics.	Descriptive Astronomy.
Junior Chemistry.	Junior Physics.
Drawing.	Junior Chemistry.
Elementary Mineralogy and Blowpipe Analysis.	Qualitative Analysis.
Surveying.	Drawing.
	Elementary Mineralogy and Blowpipe Analysis.

Optional subjects : Junior French or Junior German.

SECOND YEAR.

First Term.	*Second Term.*
Senior Mathematics.	Senior Mathematics.
Senior Chemistry.	Senior Chemistry.
Qualitative Analysis.	Quantitative Analysis.
Systematic Mineralogy.	Systematic Mineralogy.

THIRD YEAR.

First Term.	*Second Term.*
Organic Chemistry.	General Chemistry.
Descriptive and Determinative Mineralogy.	Technical Chemistry.
Geology and Petrography.	Descriptive and Determinative Mineralogy.
Quantitative Analysis.	Geology and Petrography.
Assaying.	Quantitative Analysis.
Metallurgy.	Assaying.
	Metallurgy.
	Ore Deposits.

FOURTH YEAR.

1. Special work in assaying and chemical analysis to give facility and precision in methods in use in mining, furnace and analytical laboratories.

2. An original research in Chemistry or Mineralogy, the results of which must be reported in the form of a thesis on or before April 1st.

(C) *Mineralogy and Geology.*

The degree of Bachelor of Science (B.Sc.) is conferred upon candidates who complete the following course. A diploma of the School of Mining is granted on the completion of the first three years of the course:

First Year.

First Term.	*Second Term.*
Junior Mathematics.	Junior Mathematics.
Junior English.	Junior English.
Junior Physics.	Descriptive Astronomy.
Junior Chemistry.	Junior Physics.
Drawing.	Junior Chemistry.
Elementary Mineralogy and Blowpipe Analysis.	Drawing.
Animal Biology.	Elementary Mineralogy and Blowpipe Analysis.
	Botany.

Optional subjects: Junior French or Junior German.

Second Year.

First Term.	*Second Term.*
Senior Mathematics.	Senior Mathematics.
Senior Chemistry.	Senior Chemistry.
Qualitative Analysis.	Qualitative Analysis.
Systematic Mineralogy.	Systematic Mineralogy.
Geology.	Geology.
Surveying.	

Third Year.

First Term.	*Second Term.*
Simple Quantitative Analysis.	Spherical Trigonometry.
Descrip. and Det. Mineralogy.	Assaying.
Geology and Petrography.	Descrip. and Det. Mineralogy.
Topographical Surveying.	Geology and Petrography.
Field Geology.	Geological Maps and Sections.

Fourth Year.

First Term.	*Second Term.*
Petrography.	Petrography.
Economic Geology.	Economic Geology.

Special work along lines to be chosen by the candidate; an original research in Mineralogy or Geology, the result of which must be handed in as a thesis on or before April 1st.

Group II.

(A). Civil Engineering.
(B). Mechanical Engineering.
(C). Electrical Engineering.

The work for the first three years is common to all three courses.

The following arrangement into years is suggested for the convenience of the student, and he should follow it as nearly as is practicable :—

FIRST YEAR.

First Term.	*Second Term.*
Junior Mathematics.	Junior Mathematics.
Junior English.	Junior English.
Junior Chemistry.	Junior Chemistry.
Drawing.	Drawing.
Elementary Surveying (for Courses A and C).	Descriptive Astronomy.
	Workshop (carpentry, wood-turning and blacksmithing).

SECOND YEAR.

Junior Physics.
Senior Mathematics.
Elementary Conics.
Experimental Physics.
Chemistry of Metals (1st term).
Drawing.
Workshop (patterns, models and various constructions).
Elements of Engineering.
Workshop.

THIRD YEAR.

Differential and Integral Calculus.
Synthetic Solid Geometry.
Senior Physics.
Spherical Trigonometry and Practical Astronomy (for course A only).
Thermodynamics and its application to heat motors.
Electricity and Magnetism, theoretical and experimental.
Strength of Materials, Machine Drawing and Machine design.
Elements of Mechanism.
Workshop (Machine Building).

FOURTH YEAR.

Course A.—Civil Engineering.

Analytic Solid Geometry; Practical Surveying; Elements of Geology; Principles of Engineering, with their applications to Roads, Bridges, Sewers, Drainage, &c.

In the workshop, models of Roofs, Bridges, and other large engineering constructions.

Course B.—Mechanical Engineering.

Analytical Solid Geometry; Machine Designing and Drawing; Special study of certain machines, such as the lathe, the steam engine, the clock, pumps, &c.; Metallugy of Iron, Steel and Brass; the Dynamo and the Motor.

In the workshop the building of some complex machine.

Course C.—Electrical Engineering.

Analytic Solid Geometry; Electricity and Magnetism; Theory of Alternating and Polyphase currents; Special study of the Steam Engine, Dynamo, Motor, Alternating Current Generators, Transformers and Motors; Methods of distributing and utilizing electrical energy.

The building of some complex machine, laboratory experiments and tests, drawing from original design of prescribed parts of commercial machines.

Certain books on parts of the courses of study will be prescribed for reading and study at the beginning of each session.

Regulations affecting Students in the Faculty of Practical Science.

1. No person will be considered to be a student in Practical Science until after he has registered in that Faculty.

2. No person who is not registered in the Faculty of Practical Science will be allowed to attend any of the special classes of that Faculty.

3. Practical work in the mechanical laboratories is of special importance and must be carried out in strict compliance with the requirements.

THE SCHOOL OF MINING.

THE SCHOOL OF MINING, affiliated with the University, is a branch of the *School of Mining and Agriculture*, incorporated by Act of the Legislature of Ontario.

OBJECTS.—The objects of the School of Mining are to give a scientific education, both theoretical and practical, to men studying for the profession of the mining engineer, the assayer, the consulting geologist, and the metallurgist and to provide for prospectors, mine foremen and others interested in the discovery and winning of minerals such instruction as will make their occupation more interesting and less liable to failure.

SITUATION.—The School has been placed near Queen's University so as to take advantage of the instruction therein provided in English, mathematics, physics, and biological sciences. It has been thus possible to equip and carry on a good technical school on a much smaller revenue than would otherwise be called for to maintain a high standard of scholarship.

MATRICULATION.—Before being admitted to examination on the work of the course, candidates for a degree must pass the matriculation examination, or otherwise satisfy the Faculty of their fitness to proceed with their course. Matriculation consists of the junior leaving examination for Ontario in the subjects of English and Mathematics.

The B.Sc. course in Chemistry and Mineralogy, or in Geology and Mineralogy, can be completed in one year after graduation in an honour course in Chemistry, Mineralogy and Geology, in the Faculty of Arts.

EQUIPMENT.—The classes of the School of Mining are held in the John Carruthers Science Hall, which is well equipped with chemical, assay, mineralogical and petrographical laboratories and museums. The mining laboratory in an adjoining building is furnished with machinery to illustrate the processes of crushing, stamping, amalgamating, concentrating, cyaniding, chlorinating, &c. This was the first mining laboratory built in Canada, and several important investigations on Ontario ores have already been conducted in it.

For Calendar and further information apply to the Secretary, School of Mining, Kingston.

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PART II.

PART II.

MEDALS, PRIZES AND SCHOLARSHIPS.

FOR 1900-1901.

UNIVERSITY MEDALS.

Latin.....Calhoun, Alexander, Ottawa.
Greek.....Shibley, G. R., Kingston.
Moderns.....Story, Selina G., M.A., Almonte.
English.....McNab, Elizabeth, B.A., Douglas.
History.....Murphy, Isabella, M.A., Antrim.
Mental and Moral Philosophy.....Bates, C. J. L., M.A., Portsmouth.
Political Science.....Macdonald, J. F., M.A., Lancaster.
Mathematics.....Matheson, John, M.A., Armow.
Biology.....McGuire, James, Westport.
Geology.....Burrows, Alfred G., M.A., Napanee.
Medicine.....Bogart, I. G., Berwick.
Surgery.....Bowie, H. A., Kingston.

UNIVERSITY PRIZES—ARTS.

Gowan Foundation in Botany.....McRae, A. D., B.A., Kingston.
Gowan Foundation Essay, in Political Science.....Macdonald, J. F., M.A., Lancaster.
McBean in Philosophy.....McKinnon, M. A., M.A., Lake Ainslie, C.B.
Latin Prose Composition.....Calhoun, A., Ottawa.
Greek Prose Composition.....Shibley, G. R., M.A., Kingston.
Lewis.....Wallace, James, M.A., Renfrew.
The Sir John A. Macdonald prize in Political Science given by Hon. Senator Gowan, C.M.G...Brown, T. C., Richmond.
Roughton Prize in German.....Thompson, Lottie, Picton.
Professor's Prize in French.....McCormack, S. G., Brockville.
Gowan Reading Prize.....Donnell, J. A., Beaverton and Mahaffy, F. W., Richmond Hill equal.
B. T. A. Bell prize in Metallurgy..McNab, A. J., Douglas.
Calvin, in Latin.....Playfair, Wilfrid, Almonte.

UNIVERSITY PRIZES—MEDICINE.

Dr. Hayunga.....Bell, F. McK., Kingston.

The prize of $25, awarded upon the examinations in Senior Anatomy, Senior Physiology and Materia Medica, taken by Leonard, A. H., Kingston.

UNIVERSITY SCHOLARSHIPS.

I.—Arts.

MATRICULATION.

Junior.

Nichols Foundation, No. 2.....Thompson, J. S., Picton.
Kingston.....Mallock, Eleanor, Hamilton.
Nichols Foundation, No. 3.....Welbanks, Edna, Picton. / Hollingshead, Hannah, Dutton

Senior.

The Chancellor.....McKechnie, Jas. B., Wiarton.
The Governor General.....Playfair, Wilfrid, Almonte.
Williamson, No. 1.....Black, B. S., Kingston.
Williamson, No. 2.....Errett, Bessie, Chatham.
Leitch Memorial, No. 1.....Leitch, George C., Dutton.
Nichols Foundation, No. 1.....Thompson, Lottie, Picton.
The Mayor.....McCormack, Samuel, Brockville.
Mowat.....Dunlop, Stanley, Kemptville.
Forbes McHardy.....Clark, Grace, Kingston.
Member's.....Teskey, Kathleen, Carleton Place
Special in Mathematics.....McKay, R. B., Cornwall.

Special.

Watkins.....Saunders, Elsie, Kingston.
McLennan Glengarry Foundation...Cattanach, Jessie S., Williamstown.
Marion Stewart McDonald.....McKellar, Kate M., Williamstown.

II.—Practical Science.

Chancellor's in Practical Science, $70.....McKay, R. B., Cornwall.
"*The Graduate*," *in Chemistry*, $50.....Ellis, G. E., B.A., Ellisville.
Bruce Carruthers, (Mining), $100 *each*.....Reid, J. A., Middleton, N. S. / Sutherland, T. F., Deloro.

III.—Medicine.

Chancellor's in Medicine.....Tyner, W. G., Kingston.
Hospital.....Grimshaw, W. S., Kingston. / Bogart, I. G., Berwick. / Bowie, H. A., Kingston.

IV.—Theology.

A. MATRICULATION.

David Strathern Dow.....Solandt, D. M., B.A., Kingston.
Buchan, No. 1.....Fotheringham, R. H., Rothsay.
Buchan, No. 2.....Moore, W., Carleton Place.

B. SESSIONAL.

Sarah McLelland Waddell, $120...Pringle, George, B.A., Galt.
The Chancellor's, $70.....Fraser, Thurlow, B.A., Poltimore.
Spence, $60, *Tenable two years*.....Solandt, D. M., B.A., Enos, Ver.
Leitch Memorial, $80, *Tenable three years*.....Wallace, Jas., M.A., B.D., Renfrew.
Anderson, No. 1, $40, 1*st Divinity*.McKinnon, George A., B.A., Ottawa.
Anderson, No. 2, $35, 2*nd Divinity*.....Ferguson, T. J. S., B.A., Blackstock.
Toronto, $60, *Second Year Hebrew*.....Leckie, N. M., Hamilton.
St. Andrew's Church, Toronto, $50, *O. and N. T. Exegesis*.....McDonald, W., B.D., Blakeney.
Rankine, $55, *Apologetics*.....Anthony, James, M.A., Owen Sound.
Glass Memorial, $30. *Church History*.....McLaren, W. W., M.A., Renfrew.
Mackie, $25. *The Early Apologists*.....Fraser, Thurlow, B.A., Poltimore.
James Anderson, $25. *Gaelic*.....McKinnon, M. A., M.A., Lake Ainslie, C.B.

LIST OF GRADUATES FOR 1900-1901.

MASTERS OF ARTS (M.A.)

Bates, C. J. L.....Portsmouth.
Firth, W. P., B.A.....Pickering.
Hord, A. H., B.A.....Mitchell.
Kennedy, A.....Agincourt.
Kirkland, W. S.,.....Morrisburg.
Matheson, J..... .....Armow.
Murphy, Isabella.....Antrim.

Murray, D. C.....Newton.
Rogers, C. S. G.....Niagara Falls.
Shibley, G. R.....Kingston.
Stanley, J. N.....Port Colborne.
Story, Selina G.....Almonte.

BACHELORS OF ARTS (B.A.)

Anglin, Harriet.....Kingston.
Bajus, Carrie.....Kingston.
Bellamy, Mabel.....Prescott.
Bennett, W. H.....Almonte.
Best, Isabel, M.....Peterboro.
Brown, J. W.....Hanover.
Brown, W. T.....Colebrooke.
Bryant, J. F.....Prince Albert, N.W.T.
Caldwell, Daisy.....Sydenham.
Calvin, Marion.....Kingston.
Cowan, S. G.....Peterboro.
Eldon, R. H.....Toronto.
Ellis, G. E.....Ellisville.
Fowlie, A. J.....Erin.
Fraser, Helen F.....Hamilton.
Gandier, J. C.....Newburgh.
Griffin, A. D.....Woodstock.
Hazlett, J. W.....Kingston.
Herchmer, Ethel M.....Kingston.
Johnston, D. B.....West Lorne.
Laird, Annie L.....Kingston.
Loucks, J. E.....Frankville.
Millions, Edna M.....Carleton Place.
Mills, Mabel V.....Kingston.
Murphy, W. S.....Portland.
MacCormack, M.....Crieff.
McGreer, C. G.....Napanee.
McKay, D. A.....Kinton.
MacKechnie, J. H.....Wiarton.
McLennan, G. B.....Walkerton.
McNab, Elizabeth M.....Douglas.
Petrie, J. A.....Belleville.
Powell, W. R. B.....Brockville.
Power, J. J.....Halifax.
Prendergast, A. R.....Montreal.
Sinclair, Anna E.....Ottawa.
Singleton, A. H.....Newboro.
Smith, J. E.....Cookstown.
Sparks, J. F.....Kingston.

Sutherland, J. C.....Richmond, Que.
Walker, A.....Winnipeg, Man.
Watts, J. R.....Shelbourne, Que.
Wellwood, J. A.....Fordyce.
Williamson, H. J.....Kingston.
Wight, L. S.....Deseronto.
Wilson, J. L.....Attwood.
Wilson, R. A.....Renfrew.
Wright, H. Mabel.....Renfrew.

GRADUATES IN MEDICINE (M.D.) AND MASTERS OF SURGERY (C.M.)

Ash, A. F.....Kingston.
Bogart, I. G.....Berwick.
Bowie, H. A.....Kingston.
Carr-Harris, F. F.....Kingston.
Curtin, T. V.....Brockville.
Densmore, L. D.....Maitland, N. S.
Fahey, E. W.....Kingston.
Genge, T. S.....Holleford.
Grimshaw, W. S.....Kingston.
Hurdman, A. G.....Ottawa.
Lazier, D. B.....Belleville.
Mellon, P. B.....
McCulloch, J.....Port Perry.
Macdonald, A.....Ottawa.
Macintyre, A. D.....Glencoe.
Paul, H. E., B.A.....Newburgh.
Porteous, C. A.....Kingston.
Redmond, W. C.....Bethel.
Richardson, E.....Brockville.
Roy, E.....Kingston.
Smith, D. T.....Ottawa.
Thompson, E. J.....Kingston.
Tyner, G. W., B.A.....Kingston.
Young, M. R., B.A.....Millsville, N. S.

BACHELORS OF SCIENCE (B.SC.)

Currie, P. W.....Ottawa.
Murray, J. C., B.A.....Halifax, N.S.
Rawlins, J. W., B.A.....Perth.

MINING ENGINEER (M.E.)

Stevens, F. G., B.Sc.....Rossland, B.C.

BACHELORS OF DIVINITY (B.D.)

Byrnes, J. D., B.A.....Cumberland.
Guy, W. A., B.A.....Camden East.
Hunter, R. F., B.A.....Baltimore, Ont.
McDonald, W. A., B.A.....Blakeney.
Wallace, J., M.A.....Renfrew.

TESTAMURS IN THEOLOGY.

Anthony, J., M.A.....Owen Sound.
Mackinnon, M. A., M.A.....Lake Ainslie, C.B.

DOCTORS OF LAW (LL.D.)

Mills, Hon. David.....Ottawa.
Mills, Right Rev. Bishop.....Kingston.
McGregor, P. C., B.A.....Almonte.

DOCTORS OF DIVINITY (D.D.)

Andrews, Francis.....Keene.
McLaren, E. D., M.A., B.D.....Vancouver, B.C.
Symonds, Herbert.....Ashburnham.

PASS LISTS.

ARTS.

I. SUPPLEMENTAL EXAMINATIONS, SEPTEMBER, 1900.

Junior Latin.

Kirkland, W. S.
Flath, Emma.
Donnell, J. A.
Pentland, G. E.
Horsey, Florence
Quincey, J. A.
Connolly, N. W.
Jones, J. E.
Mothersill, G. S.

Senior Latin.

Allison, Mary L.
McIntosh, P. A.

Junior Greek.

Brokenshire, W. H.
Donnell, J. A.
Mitchell, J. V.
Wilson, Annie J.

Senior Greek.

Power, John J.

Junior French.

Div. III.

Darroch, W. F.
Donnell, J. A.

Senior French.

Div. II.

Brick, Wm.

Div. III.

Mills, R. M.

Senior German.

Div. III.

Coad, Edith.
Brown, J. W.

Senior English.

Cowan, S. G.
Griffin, A. D.
Patterson, W. R.
Eldon, R. H.
Waldron, Lottie
McIntyre, J. M.
Wight, L. S.
Power, Gertrude
McIntosh, P. A.
Redden, Marion
Scott, A. K.
Wellwood, J. A.

Junior History.

Shaw, Lily
Horsey, Florence
Malone, Vida
Donovan, Gertrude
Robertson, J. B.

Senior History.

Grey, Stearns

Junior Ancient History.

Ramsay, W.

Junior Philosophy.

Div. I.

Ramsay, Wm.

Div. II.

Perney, F. E.
Beckett, S. E.
Power, Gertrude

Div. III.

McIntosh, Pember A.
Allen, John
Spence, J. C.
McIntyre, J. M.

Senior Philosophy.

Aiken, J. A.
Power, J. J.
Philp, J. H.
MacKeracher, Mary
Brown, J. W.
Hunter, H. S.
Ellis, G. E.

Junior Poltiical Science.

Macdonald, J. F., M.A.
Prendergast, A. R.
Twitchell, E. G. C.
Smith, J. E.
Anglin, Harriet
Scott, A. K.
Bellamy, Mabel

Senior Political Science.

Aiken, J. A.
Mason, G. W.
Sutherland, J. C.
Williams, E. J. F.

Junior Mathematics.

Petrie, J. E.
Petapiece, A. W.
Wilson, Jessie A.
Laird, Annie L.
Fleming, Maude E.
Ruttan, A. C.
Donovan, Gertrude.
Leitch, A.

Senior Mathematics.

Perney, F. E.
Fletcher, W. H.
Girvin, H.
Wellwood, J. A.
Sutherland, J. C.
Leitch, A.

Junior Physics.

Div. II.

Williams, E. J. F.
Hunter, H. S.
Mills, R. M.

Div. III.

Reynolds, M.
Kingston, E. A.
Leitch, A.

Senior Physics.

Div. II.

MacKay, D. A.

Div. III.

Gillespie, Peter.
Robinson, J.

Botany.

Barker, J.

Animal Biology.

Williamson, H. J.
Griffin, A. D.
Young, James M.
Stewart, J. A.

Junior Chemistry.

Reynolds, M.
Powell, W. R.

Senior Chemistry.

Macdougall, H. Lila.
Munro, Wm. A.

II. SESSIONAL EXAMINATIONS.

Junior Latin.

Div. I.

Malloch, Eleanor
Campbell, D.
Reid, Lulu
Chambers, L. P.
Bright, A.
Glover, H.
Elder, Hosie
Dwyer, J. G.
Ostrom, Ethel L.
Boland, W. A.
Sullivan, J. F.
Race, W. B.
Ramsay, D. C.
Duff, K. Isobel
Sullivan, J. A.
McLeod Lola

Div. II.

Brown, J. W.
Watson, G. A.
Purdy, May
Marshall, D. H.
Munro, M. F.
Charlesworth, J. W.
Ayers, M. H.
Leitch, G. C.
Sexton, J. H.
Kerr, T. R.
Cannon, J. D.
Spence, H. D.

Hazlett, J. W.
Whinton, W. E.
Hiscock, Rita
Buchanan, Mabel
Caldwell, O. Max
Campbell, A. L.
Lindsay, M. A. F.
Hutchison, R.

Div. III.

Cattanach, Jessie S.
Ferrier, G. C.
Beveridge, R. W.
Brown, H. W.
McCormack, Irene
Robertson, J. J.
Dadson, Helena
Pierce, Addie
Aylesworth, F. L.
Cooke, W. J.
McCutcheon, J. M.
French, C. A.
Sargent, F. R.
Hunt, S. A.
Jackson, V. W.
Fleming, A. G.
McLellan, D.
Boyd, R. M.
Gibson, A. S.
Cumming, W. A.
Healey, H. W.
Pringle, J. F.

Senior Latin.

Div. I.

Playfair, W.
Thompson, Lottie
Duncan, T.
Teskey, Kathleen
Macgregor, Annie K.
Macgregor, Grace C.
McCormac, S. G.
Brydon, R.
Errett, Bessie D.
Pettit, L.
Black, B. S.
Saunders, Elsie E.

Div. II.

Clark, Grace
Connelly, N. W.
Weese, Meta
Bennett, W. L.
Gavin, W. F.
Jewett, T. J.
McIntyre, D. N.
McLean, R. A.
Birch, Beatrice
Borley, H. D.
Dingwall, J.
Dingwall, M.
Tompkins, Louise H.
Montgomery, Fannie L.
Cummings, Lucy
McPhail, J. G.
Stewart, J. R.

Div. III.

Stewart, Margaret
Grant, Ethel
Caldwell, Daisy
McConkey, Kate
Laing, Maybelle M.
Hamer, F. L.
Byers, D. R.
Mahaffy, F. W.
Sinclair, Anna E.

Junior Greek.

Div. I.

Campbell, D.
Glover, H.
Reid, Lulu

Watson, G. A.
Chambers, L. P.
Munro, M. F.

Div. II.

Purdy, Mary
McDonald, J. M.
Eldon, R. H.
Kerr, T.
Brown, G. A.

Marshall, D. H.
Bright, A.
Bennett, W.
Ramsay, D. C.
Miller, F.

Div. III.

Miller. J. H.
Hainer, F. L.
McIntosh, J. A.

Wright, J. H.
Graham, R. R.

Senior Greek.

Div. I.

Playfair, Wilfrid
Duncan, T.

Black, B. S.
Dingwall, James

Div. II.

Bolton, L. L.
Pettit, Louis
McLean, R. A.
Dingwall, Malcolm
McConachie, J. S.

Schrag, A. R.
McIntyre, D. N.
Errett, Bessie D.
Stewart, J. R.
Kennedy, A. H.

Div. III.

Ellicott, J. W. H.
Dingwall, Annie C.
McQueen, M. A.
Gray, Stearns

Caldwell, J. S.
Tighe, F. J.
Fleming, W. S.

Junior French.

Div. I.

Malloch, Eleanor
McLeod, Lola
Dwyer, J.

Ostrom, Ethel
Hiscock, Reta

Div. II.

Dadson, Helena
Elder, Hosie
Cooke, W. J.
Boyd, R. M.
Buchanan, Mabel

Cattanach, Jessie
McCormack, Irene
Caldwell, Max

Div. III.

Healey, H. W.
Kidd, A.
Sparks, Etta
Leitch, G. C.
Maxwell, Mary
Sargent, F. R.
Robertson, J.
Loucks, J. E.
Ide, W.
Whinton, W.
Pentland, G. E.
Spence, H.
Grant, Flora
Pringle, J. A.
Pierce, Addie
Robinson, John
Cumming, W.
McPherson, H. A.
Might, L.
Sharp, G. M.
Hunt, Sarah
McKay, J.
Bright, A.

Senior French.

Div. I.

McCormack, S. G.
Thompson, Lottie
Clark, Grace

Div. II.

Schroder, S.
Teskey, Kathleen
Weese, Meta
Saunders, Elsie
Robertson, J. B.
Laing, Maybelle

Div. III.

Race, W. B.
Grant, Ethel
McPherson, E. A.
Montgomery, Fannie L.
Macgrergor, Grace
McConkey, Kate
Bryson, Isabel
Gavin, W. F.
Birch, Beatrice
Tompkins, Lottie H.
Macgregor, Annie K.
Thompson, Edna
Wells, E. J.
Bennett, Margaret
Burr, Lenne

Junior German.

Div. I.

Malloch, Eleanor

Div. II.

Dwyer, J. G.
Sparks, Etta
McPherson, H.
Cattanach, Jessie S.
Pentland, G. E.
Ostrom, Ethel

Div. III.

Caldwell, O. Max
McLeod, Lola
Hiscock, Reta
Dadson, Helena
Kerr, T. R.
Philp, J. H.

Buchanan, Mabel
Cannon, J. D.
Aiken, J. A.
Cooper, A. B.
Harpell, J. J.
Hunt, Sarah A.
Walker, H.
Patterson, G.
Cooke, W. J.
Loucks, J. E.
Johnson, D. B.

Senior German.

Div. I.

Thompson, Lottie
McCormack, S. G.
Teskey, Kathleen
Clark, Grace

Div. II.

Saunders, Elsie
Laing, Maybelle
McEwen, G. G.
Weese, Metta
Race, W. B.
Grant, Ethel

Div. III.

Macgregor, Grace
McConkey, Kate
Birch, Beatrice
Gavin, W. F.
Sinclair, Anna E.
Tompkins, Lottie H.
Bryson, Isabel
McGregor, Annie K.
Thompson, Edna
Boyd, Agnes
Fraser, Jane A.

Junior English.

Div. I.

Malloch, Eleanor
Boland, W. A.
Maxwell, Mary
Chambers, L. P.
Ide, W.

Div. II.

Aykroyd, F. W.
Pierce, Addie E.
Down, G. W.
Marshall, D. H.
Dadson, Helena
Campbell, D.
Buchanan, Mabel
Miller, F.
Elder, Hosie
Ostrom, Ethel L.
Bennet, Walter
Beveridge, R. W.
Caldwell, O. Max
Cameron, A. R.
Cooke, W. J.
Aikin, J. A.
McLeod, Lola
McCormack, Irene
McKay, J. M.
Purdie, May
Sharpe, G. M.
Spence, H. D.
Cattanach, Jessie S.
Glover, H.
Lindsay, M. A. F.
McLellan, D.
Ayers, M. H.

Div. III.

Glover, W. R.
Robertson, J. J.
Wright, J. H.
Fleming, A. G.
Sargent, F. R.
Whinton, D.
Ferrier, G. C.
Munro, M. F.
Pringle, J. F.

Reid, Lulu
Smythe, W. L.
Hunt, Sarah A.
Harrison, F. W.
Tanton, F.
Watson, G. A.
Bright, A.
Sears, J.
Sullivan, J. A.

Senior English.

Div. I.

Playfair, W.
Teskey, Kathleen

Ferguson, J.
Montgomery, Fannie L.

McLean, R. A.
McCallum, S.
Philp, J. H.
Stewart, Martha G.

Duff, K. Isabel
Anderson, P. M.
Clark, Grace
Gavin, W. F.
Saunders, Elsie E.

Weese, Metta
Murray, D. C.
Watts, John

Div. II.

Forfar, Lena M.
Dingwall, M.
Jackson, V. W.
Milloy, J. G.
Brydon, Robert

McCormack, S. G.
Nicolle, F. R.
McIntyre, D. N.
Laing, Maybelle
Allen, John

McGregor, Annie K.
McEwen, G. G.
Truscott, S. A.
Thompson, Lottie
Duncan, T.

Hunter, H. S.
McGregor, Grace
Hutchinson, R. A.
Goodwill, J. E. L.
Pentland, George E.

Gibson, Ethel
Race, W. B.
Ward, W.
Chant, W.
Miller, J. H.
Campbell, A. L.

Bryson, Isabel
Mahood, A. E.
Grant, Ethel
McKechnie, J. B.
Fotheringham, R. H.
Porter, W. C.
Ellicott, T. W. H.

McDonald, J. M.
Thompson, Edna
Williams, W. H.
Pettit, L.

Robertson, J. B.
Dingwall, Annie C.

McIntyre, N. C.
Dwyer, J. G.
Macpherson, H.
Bailie, A. A.
Cameron, Alex. E.
Errett, Bessie
Dingwall, James
Ward, H.
Potter, R.
Hartin, G. H.
Thompson, A. Y.
Kidd, W. J.
Birch, Beatrice
Fraser, Jane A.

Div. III.

Robb, J. J.
Nixon, T.
Simpson, B. L.
McConkey, K.
Stewart, J. R.
Macqueen, M. A.
Black, B. S.
Reynolds, M.
Graham, Colin W.
Loucks, W. F.
Hamer, F. L.

Sparks, W.
Reid, E. J.
Graves, Maude
Dunlop, J. E. S.
Fleming, W. S.
Macphail, J. G.
Munro, G.
Britton, A.
Tompkins, L. H.
Woods, J.H.
Petapiece, A. W.

Junior History.

Div. I.

Kennedy, A. H.

Div. II.

Thompson, Lottie
Hutchison, J. H.
Kidd, Chas. E.

Williams, E. J. F.
Pettit, Louis

Div. III.

McIntyre, J. M.
Laidlaw, C.
Grant, Ethel
Milne, M. R.
Ewing, Florence

Bryden, R.
McGregor, Annie
Reilly, F. V.
McGregor, Grace
Harrison, Fred. W.

Senior History.

Div. I.

Powell, W. R.
Walkem, Knox

Goodwill, J. E. L.
Williams, E. J. F.

Div. II.

Harten, G. H.
Newton, Metta
Watson, Alice

Williams, Walter
Kidd, Charles E.

Div. III.

Keys, S. J.
Shaw, Lily
Brown, J. W.
Hewton, Gertrude
Robinson, John
Fenwick, Chrissie
Sexsmith, M. E.
Eldon, R. H.

Cummings, Lucy
McAlister, Ursilla
Horsey, Florence
Slack, E. B.
Henderson, M.
Wilson, Jessie
Forfar, Lena
McIntyre, N. C.

Junior Philosophy.

Div. I.

Forfar, Lena
Calvin, D. D.
Teskey, Kathleen
Halladay, R. W.

McCrimmon, Annie L.
Macpherson, Hector

Div. II.

Newton, Meta
Wilson, Jessie A.
Montgomery, Fanny L.
McDonald, J. M.
McEwen, George G.
Williams, Walter H.
Goodwill, J. E. L.
Hewton, Gertrude
Ferguson, J.
Duncan, T.
Reid, E. J.
Thompson, Edna
McCormack, S. G.
Anderson, P. M.
Weese, Metta
Pentland, George

Fenwick, Chrissie
Campbell, A. L.
Wilson, Annie J.
Saunders, Elsie
Macgillivray, T.
Macqueen, M. A.
McKechnie, J. B
Gavin, W. F.
Dingwall, James
Paterson, W. R.
McLean, R. A.
Kidd, W. J.
Robertson, G. D.
Beveridge, R. W.
Cumming, Lucy
Potter, R.
Stewart, Martha G.
Brown, George A.
McPhail, J. G.

Div. III.

Taylor, Mabel A.
Cameron, A. E.
Gibson, Adam S.
Coad, Edith
McLeod, K. C.
McIntyre, D. N.
Kingston, E. A.
Bryson, Isabel
Dwyer, E. T.
Connolly, N. W.
Simpson, B. L.
Fleming, A. G.
Walkem, Knox
Young, J. M.
McConkey, Kate
Chant, W.
Dunlop, S.
Mills, R. M.
Black, B. S.
Wright, J. H.
Errett, Bessie
Thompson, A. Y.
Graham, Elsie K.

Senior Philosophy.

Div. I.

Smirle, Harriet
Calvin, Marion
Stewart, Margaret
Vaux, Lilian
Gandier, J. C.
Herchmer, Ethel
Ferguson, J. Y.
MacInnes, W.

Div. II.

Petrie, J. A.
Murphy, W. S.
Maclaren, C. H.
Macdonnell, L.
Borley, H. D.
Mahaffy, F. W.
Wright, Mabel
McLennan, G. B.
Fraser, Helen
Fowlie, A. J.
Bryant, J. F.
Cook, Gertrude
Kidd, C. E.
Williamson, H. J.
Wilson, J. F.
Cowan, S. G.
McConachie, J. C.
Fleming, Maud
Slack, E. B.

Div. III.

Hazlett, J. W.
Branscombe, M. E.
Spence, J. C.
Munro, G.
Nichol, C. O.
McGreer, C. G.
Dickson, Evelyn
Lowry, Blanche
Nixon, T.
McIntosh, P. A.
Allison, Mary L.
Miller, J. H.
Robinson, J.

Junior Political Science.

Div. I.

Forfar, Lena M.
Vaux, Lilian
Mills, Mabel
Gibson, Ethel
McConachie, J. C.
Calvin, Marion

Div. II.

Macdonnell, Logie
Macgillivray, T. D.
Miller, J. H.
Ward, William
Newton, Meta
McPherson, Hector
Lowry, Blanche
Bernard, A. T.
Fowlie, A. J.
Slack, E. B.
McPhail, J. E.
Goodwill, J. E. L.
Hunter, H. S.
Malloch, G. S.
McQueen, M. A.

Div. III.

Milloy, J. G.
McIntyre, N. C.
Fleming, W. S.
Miller, Fred
Allison, Mary L.
Silver, Alice
Graham, R. R.
Bailie, A. A.
Pocock, Charles
Murphy, W. E.

Senior Political Science.

Div. I.

MacDonald, J. F.
Kidd, C. E.
Vaux, Lilian
Watts, John
Walkem, Knox
Maclaren, C. H.
McConachie, J. C.
Laidlaw, C.

Div. II.

Caldwell, J. S.
McLeod, K. C.
Ward, W.
Sexsmith, M. E.
Goodwill, J. E. L.
Hunter, H. S.

Div. III.

McIntyre, J. M.
Hartin, George H.
Newton, Meta
Bellamy, Mabel
Milne, M. R.
Scott, A. K.

Junior Mathematics.

Div. I.

Malloch, Eleanor
Boland, W. A.
Glover, H.
Sullivan, J. A.
Campbell, D.
Ostrom, Ethel L.
Sharp, G. M.
Ayers, M. H.
Playfair, W.

Div. II.

Thornton, L. A.
Glover, W. R.
Duncan, T.
Elder, C. Hosie
McGregor, Annie K.
Stewart, J. R.
Stewart, Margaret
Beveridge, R. W.

Div. III.

Cattanach, Jessie S.
Buchanan, Mabel
Hainer, F. L.
Laing, Maybelle
Munro, M. F.
Purdy, May
McLean, R. A.
Miller, Fred
Caldwell, O. Maxwell
Marshall, D. H.
Laidlaw, C.
Jackson, V. W.
Maxwell, Mary E.
Healy, H. W.
Spence, H. D. L.
Chambers, L. P. C.
Patterson, W. R.

Hunt, Sarah A.
Dingwall, Annie C.
Birch, Beatrice D.
Cooke, W. J.
Shaw, Lily
Kidd, W. J.
Pringle, J. F.
Sargent, F. R.
Whinton, W. E. H.
Hartin, G. H.
Reid, Lulu
Hiscock, Reta
Gibson, A. S.
McLeod, Lola
Dingwall, M.
Wright, E. A.
McCutcheon, J. M.

Senior Mathematics.

Div. I.

Hagan, J. W.
Wells, E. J.

Liebner, Ernest
Brown, J. W.

Div. II.

Loucks, W. F.
McCallum, S.

Dunkley, W. G. D.

Div. III.

Sutherland, J. C.
Burr, Lenne
Robb, J. J.

Nicolle, F. R.
Murray, D. C.

Junior Physics.

Div. I.

Campbell, A. L.
Raymond, A. L.

MacKechnie, J. B.

Div. II.

Potter, R.
Calvin, D. D.
Allen, John
MacLaren, C. H.
Grant, J. G.

Thornton, L. A.
Sharpe, G. M.
Sparks, William
Nicolle, F. R.
Robb, J. J.

Div. III.

Graham, C. W.
Halliday, R. W.
Thompson, A. Y.
Mahood, A. E.
Aykroyd, F. W.
French, C. A.
Petrie, J. A.

Burr, Lenne
Wilson, Jessie
Laidlaw, C.
Hutchinson, R. A.
Mundell, Alma E.
Millions, Edna

Senior Physics.

Div. I.

Wells, E. J.

MacDougall, F. H.

Div. II.

MacEwen, G. G.
Robertson, G. D.
Hagan, J. W.

Schroder, S.
Dunlop, J. E. S.

Div. III.

Murray, D. C.
Bloor, W. R.
Mitchell, J. V.
Sparks, William
Kidd, W. J.
Lawlor, R. G.
MacCallum, S.
Petapiece, A. W.

Grant, J. G.
Power, Gertrude
Williamson, H. J.
MacKechnie, J. B.
Fletcher, W. H.
Might, L.
Simpson, B. L.
Aylesworth, F. L.

Botany.

Div. I.

Bolton, L. L.
Wells, Ernest J.
Mills, Mabel
Baker, M. B., B.A.
Nicolle, F. R.
Sparks, J. F.
Fraser, Helen F.
Reynolds, M.
Ellis, George E.
Watson, Alice R.

Jackson, V. W.
Powell, Walter R.
Allison, Mary L.
Patterson, W. R.
Power, Gertrude
Cowan, S. G.
Ferguson, J. Y.
Mahood, A. E.
Stewart, J. R.
Halliday, R. W.

Div. II.

Johnson, D. B.
Hazlett, J. W.
Robb, J. J.
Ayers, M. H.

Hunter, H. S.
McIntyre, J. M.
Fralick, E. L.
Dwyer, E. J.
Borley, H. D.

Div. III.

Twitchell, E.
Graham, Colin

Down, G. W.
Caldwell, J. S.

Animal Biology.

Div. I.

Jackson, V. W.
Singleton, A. H.

Reynolds, M.

Div. II.

Halladay, Rolland
Mills, Mabel
Fraser, Helen

Bolton, L. L.
Sullivan, James

Div. III.

Fraleck, E. L.
Cowan, S. G.
Hazlett, J. W.
Patterson, W. R.
Power, Gertrude
Ayers, M. H.
Baker, M. B., B.A.
Johnson, D. B.
Hunter, H. S.
Allison, Mary
Ellis, G. E.
Ferguson, J. Y.

Mahood, A. E.
Powell, Walter R.
Dwyer, E.
Borley, H. D.
Stewart, J. R.
Watson, Alice
Nicolle, F. R.
McIntyre, J. M.
Pocock, C.
Graham, C.
Sparks, J. F.

Junior Chemistry.

Div. I.

Allen, John
Fraser, Helen

Sparks, W.
Glover, W. R.

Div. II.

Sharp, G. M.
Brown, W. T.
Mills, Mabel
Whinton, W. E. H.
Wilson, Jessie
Halladay, R.
Sullivan, J. A.
Slack, E. B.

Power, Gertrude
Herchmer, Ethel
Horsey, Florence M.
Calvin, D. D.
Sparks, J. F.
Watson, Alice
Laidlaw, C.
Gibson, Adam S.

Div. III.

Britton, A. H.
Pringle, J. F.
Beveridge, R. W.
Patterson, W. R.
Sargent, F. R.
Sears, John
McIntyre, J. M.
Hagar, A. E.
Fowlie, A. J.
Twitchell, E.
Fleming, A. G.
Millions, Edna
Wright, Mabel
Mundell, Alma E.

Senior Chemistry.

Div. I.

Ellis, George E.
Raymond, Anson L.
Nicolle, F. R.

Div. II.

McCallum, S.
Baines, A. W.
Robb, J. J.
Singleton, A. H.
Mahood, A. E.
Petapiece, A. W.
Williamson, H. J.
Wells, Ernest J.
Voaden, J.
Bolton, L. L.
Hagan, J. W.
Kidd, W. J.

Div. III.

Aylesworth, Frederick L.
Griffin, A. D.
Cowan, S. G.
Kingston, E. A.

Elementary Mineralogy and Blowpipe Analysis.

Div. II.

McDougall, F. H.
McCallum, S.
Longwell, A.
Voaden, J.

Div. III.

Hagan, J. W.
Griffin, A. D.
Allen, J.

Pass Geology.

Div. I.

Longwell, A.

Div. II.

Raymond, A. L.
Voaden, J.
McDougall, F. H.
Thornton, L. A.

Div. III.

Griffin, A. D.

ARTS HONOUR LISTS, APRIL, 1901.

Latin—Preliminary.

Class I.

Cook, Gertrude
Hord, A. H.

Class II.

Cameron, A. R.
Sheppard, F. W.
Froats, W. C.

Class III.

Reilly, F. J.
Quigley, J.
Ramsay, W.

Latin—Final.

Class I.

Calhoun, A.
Billings, T. H.
Thompson, A. M.
Shibley, G. R.
Lowe, W. D.

Class II.

Gandier, J. C.

Class III.

Bryant, J. F.

History—Roman.

Calhoun, A.
Cook, Gertrude
Froats, W. C.
Quigley, J.
Reilly, F. J.

Greek—Preliminary.

Class I.

McInnes, W.

Class II.

Cook, Gertrude
Cameron, A. R.
Quigley, J.
Malloch, G. S.
Macdonnell, Logie

Class III.

Ramsay, W.
Rielly, F. J.

Greek—Final.

Class I.

Shibley, G. R.
Warren, F. R. W.
Rogers, C. S. G.

Class II.

Gandier, J. C.
Smith, J. C., B.A.

Class III.

Bennett, W. H.
Bryant, J. F.

History—Greek.

McInnes, W. H. E.
Cook, Gertrude
Cameron, A. R.
Malloch, G. S.
Macdonnell, L.
Quigley, J.
Ramsay, W.
Rielly, F. J.
Warren, F. R. W.

French—Preliminary.

Class I.

Williams, W. H.

Class II.

Hewton, Gertrude
Graham, Elsie
Stewart, Margaret J
Vaux, Lilian

Class III.

McCrimmon, Annie L.
Rielly, F. V
Fleming, Maude E.
Fenwick, Chrissie
Coad, Edith
Ewing, Florence
Macgillivray, T. D.
Malone, Vida

French—Final.

Class I.

Story, Selina G.
MacCormick, M.
Bajus, Carrie

Class II.

Best, Isabel M.
Barker, J.
Macalister, Ursilla
Laird, Annie

Class III.

Miller, Eva

German—Preliminary.

Class I.

Williams, W. H.

Class II.

Hewton, Gertrude
McCrimmon, Annie L.
Vaux, Lilian
Wright, Mabel
Graham, Elsie K.
Stewart, Margaret

Class III.

Coad, Edith
Fenwick, Chrissie
Fleming, Maude E.
Macgillivray, T. D.
Malone, Vida
Silver, Alice R.

German—Final.

Class I.

Story, Selina G. — Best, Isabel M.

Class II.

Macalister, Ursila — Laird, Annie
MacCormack, M. — Bajus, Carrie

Class III.

Miller, Eva

Italian.

Class I.

Story, Selina G.

English—Preliminary.

Class I.

Smirle, Harriet — Vaux, Lilian

Class II.

Hewton, Gertrude — Macdonald, Logie
Kidd, C. E. — Herchmer, Ethel
Weese, Metta — Malloch, G. S.
Williams, W. H. — Flath, Emma S.
Clothier, J. O.

Class III.

Patterson, George — Malone, Vida
Fleming, Maud E. — Fenwick, Chrissie
Graham, Elsie K. — Kennedy, A. H.
Thompson, Edna G.
Ewing, Florence M.

English—Intermediate.

Class I.

Calvin, Marion

Class II.

Prendergast, A. R.

Class III.

Wright, Mabel — Ferguson, J. Y.
MacIntosh, J. A. — Sparks, J. F.
Hagar, A. E. — Laidlaw, C.
Fraser, Helen F.

English—Final.

Class I.

McNab, Elizabeth M. — Hord, A. H.
Murphy, Isabella — Macdonald, Jas.
Herchmer, Ethel

Class II.

Wilson, R. A.

Class III.

Henderson, M.
Flath, E. S.
Bajus, Carrie
Day, J.
Loucks, J. E.
Johnson, D. B.

History—Preliminary.

Class II.

Powell, W. R.
Mason, G. W.
Harten, G. H.

History—Final.

Class I.

Murphy, Isabella

Class II.

Caldwell, J. A.
Loucks, J. E.
Johnston, D. B.

Class III.

Nesbit, D. A.

Philosophy—Final.

Class I.

Bates, C. J. L.
Wilson, R. A.

Political Science—Preliminary.

Mason, G. W.
Maclaren, C. H.
McLennan, G. B.
Sexsmith, M. E.

Political Science—Final.

Class I.

MacDonald, J. F.
Brown, T. C.

Mathematics—Preliminary.

Truscott, S. A.
McKechnie, J. B.
Allen, J.
Duff, K. Isobel
McEwen, G. G.
Robertson, G. D.
Simpson, B. L.
Chant, W.
Dunlop, J. E. S.
Leitch, G. C.

As Senior and an Optional Class.

Graham, R. R.
Lawlor, R. G.
Mitchell, J. V.
Ferguson, J.

As Substitute for Senior Class only.

Calvin, D. D.
Brick, W.
Thompson, A. Y.

Mathematics—Final.

Class I.

Matheson, J.
Kennedy, A.
Stanley, J. N.

Class II.

McKechnie, J. H.

Physics—Preliminary.

McNab, G. G.
Dwyer, J. G.
Warren, L. A.
Walker, H.

Class II.

Griffin, A. D.
Truscott, S. A.

Class III.

Horsey, Florence M.
Stewart, Martha G.

Botany—Preliminary.

Class I.

Voaden, J.
Brown, J. W.
Chambers, R.
Bloor, W. R.
Baines, A. W.
McIntosh, P. A.

Class II.

Leitch, Alex.

Botany—Final.

Class I.

McGuire, J.

Animal Biology—Preliminary.

Class I.

Bloor, W. R.
Chambers, R.
Voaden, J.
Young, J. M

Class II.

Raines, A. W.
Hoppin, L. W.

Class III.

Reynolds, M.
Macgillivray, T. D.

Animal Biology—Final.

Class I.

McGuire, J.

Class III.

Kingston, E. A.

Chemistry—Preliminary.

Class I.

McDougall, F. H.
Longwell, A.
McGuire, J.
Firth, W. P.

Class II.

Young, J. M.

Chemistry—Final.

Class I

Firth, W. P.

Class II.

Hoppin, L.
Hazlett, J. W.

Mineralogy—Preliminary.

Class I.

Bolton, L. L.
McDougall, F. H.
Longwell, A.

Class III.

Dunkley, W. G.

Mineralogy—Final.

Class II.

Girvin, H. G.

Geology—Final.

Class I.

Burrows, A. G., M.A.

PRACTICAL SCIENCE.

SUPPLEMENTAL EXAMINATIONS, SEPTEMBER 1900.

Junior Mathematics.

Malone, E. E.
Gleeson, V.
Stilwell, A. J.

Senior Mathematics.

Stilwell, A. J.
Noble, D. S.

Junior Physics.

Mackie, F. H.

Senior Physics.

Horsey, B. T.

Junior Chemistry.

Anglin, C.
Mackie, F. H.

Elementary Mineralogy.

Chapelle, J. W. S.

Systematic Mineralogy.

Reid, G. C.

Pass Geology.

Gleeson, V.
Redmond, A. V.

Surveying (*Second Year*), *Plotting.*

Currie, P. W., B.A.

SESSIONAL EXAMINATIONS, APRIL 1901.

Junior English.

Div. II.

Corkhill, E. T.
Wilson, E. E. D.
McKay, R. B.
Smyth, W. L.
Keith, G. C.
Anson-Cartwright, R. H. M.
Silver, L. P.
Wagar, C. M.

Junior Mathematics.

Div. I.

McKay, R. B.
Corkhill, E. T.

Div. II.

Reid, G. C.
Wilson, E. E. D.
Keith, G. C.
Smyth, W. L.

Div. III.

Wright, A.
Strachan, B. O.

Ferguson, M.
Chaplin, G. W.
Mackie, G. A.
Belfour, H. M.
Tett, B.

Senior Mathematics.

Div. I.

McNeil, W. K.

Div. II.

McDiarmid, S. S.
Rose, S. L.
Wilgar, W. P.
Malone, E. E.
Jackson, H. G.

Bartlett, J.

Div. III.

Mackie, F. H.
Gordanier, W. N.
Webster, A. R.

Finlayson, M. D.
Craig, H. B. R.

Descriptive Astronomy.

Div. I.

Squire, R. L.
McKay, R. B.

McCallum, H. E.
Wilson, E. E. D.

Div. II.

Devitt, G. H.
Keith, G. C.
Watt, J. W.
Malone, E. E.
Chapelle, J. W.
Aykroyd, F. W.

Baker, M. B., B.A.
McKenzie, G. C.
Webster, A. R.
Baker, J. C.
Belfour, H. M.

Div. III.

Smythe, W. L.
Anson-Cartwright, R. H. M.
Mackie, F. H.

Corkill, E. T.
Wright, A.
Wagar, C. M.
Mackie, G. A.

Conics I.

Henderson, E. W.
Rose, S. L.
Baker, J. C.
Grover, G. A.

McNab, A. J.
Knight, C. W.
Gordanier, W. N.

Calculus I.

Baker, H.
McCallum, H. E.
McNab, A J.
Sutherland, E.
Grover, G.

Spherical Trigonometry.

Fairlie, M. F.
McCallum, H. E.
Grover, G. A.
Noble, D. S.
McNab, A. J.
Craig, H. B. R.
Silver, L. P.

Mechanism.

Sutherland, E.

Junior Physics.

Div. I.

MacKay, R. B.
Bartlett, Jas.

Div. II.

Squire, R. L.
Belfour, H. M.

Div. III.

Corkill, E. T.
Wilson, E. E.
Mackie, G. A.
Thompson, Arthur

Senior Physics.

Div. I.

McCallum, H. E.
Henderson, E. W.
McDiarmid, S. S.
Jackson, H. G.
Rose, S. L.
Wilgar, W. P.

Div. II.

Bartlett, Jas.
Finlayson, M. D.
Gordanier, W. N.

Div. III.

Baker, J. C.
Mackie, F. H.
Malone, E. E.

Junior Chemistry.

Div. I.

MacKay, Robert B.

Div. II.

Wilson, E. E. D.
Corkill, E. T.
Squire, R.
Mackie, George A.
Craig, H. B. R.
Belfour, H. M.
Strachan, B. O.
Keith, Gordon C.
Aykroyd, F W.

Div. III.

Reid, F. D.
Thompson, Arthur
Smyth, W. L.
Wright, A.

Webster, A. R.
Anson-Cartwright, R. H. M.
Gilbert, F.
Harper, W. B.

Senior Chemistry.

Div. I.

Jackson, H. G.
McNeill, W. K.

Div. II.

Mackie, George A.
Malone, E. E.
McDiarmid, S. S.

Wilgar, W. P.
Wagar, C. M.
Horsey, G. F.

Div. III.

Finlayson, M. D.
Bartlett, James
Baker, J. C.

Mackie, F. H.
Ferguson, Melis
Chaplin, G. W.

Chemistry of Metals.

Div. III.

Henderson, E. W.

Qualitative Analysis.

Div. I.

McDiarmid, S. S.
McNeill, W. K.
Jackson, H. G.
Wilgar, W. P.

Bartlett, James
Finlayson, M. D.
Knight, C. W.
Baker, J. C.

Div. II.

Malone, E. E.
MCallum, H. E., B.A.
Devitt, G. H.
Drummond, L. E.
Tett, B.

Chapelle, E. W.
Mackie, F. H.
Pense, E. H.
Chaplin, G. W.
Craig, H. B. R.
Workman, J. K.

Div. III.

MacKenzie, G. C.

Mackie, G. A.

Physical Chemistry.

Div. II.

McRae, A. D.

Div. III.

Stilwell, A. J.
Scott, O. N.

Murray, J. C.

Quantative Analysis and Assaying.

Div. I.

McNab, A. J.

Div. II.

McRae, A. D.
Reid, J. A.
Stilwell, A. J.
Grover, G. A.
Noble, D. S.
Workman, C. W.
Silver, L. P.

Div. III.

Fairlie, M. F.
Redmond, A.
Reid, G. C.
Gleeson, J. V.

Technical Chemistry.

Div. I.

Reid, J. A.
McNab, A. J.
Fairlie, M. F.

Div. II.

Stilwell, A. J.

Div. III.

Noble, D. S.
Workman, C. W.

Organic Chemistry.

Div. I.

Reid, J. A.

Div. II.

Stilwell, A. J.

Div. III.

Redmond, A. V.
Scott, O. N.
Murray, J. C.

Elementary Mineralogy and Blow-pipe Analysis.

Div. I.

McNeill, W. K.

Div. II.

Devitt, G. H.
McKay, R. B.
Squire, R.
Reid, F. D.
Anson-Cartwright, R. H. M.

Div. III.

Corkill, E. T.
Craig, H. B. R.
Stilwell, A. J.
Knight, C. W.
McKenzie, G. C.
Chaplin, G. W.
Gilbert, F.

Systematic Mineralogy.

Div. I.

McCallum, H. E., B.A. — Dickson, C. W., M.A.

Div. II.

Bartlett, J. — Jackson, H. G.
McDiarmid, S. S. — McNeill, W. K.
Workman, J. K. — Wilgar, W. P.
Mackie, F. H.

Div. III.

Malone, E. E. — Stilwell, A. J.
Finlayson, M. D. — Redmond, A. V.
Camsell, C. — McRae, A. D., B.A.
Baker, J. C.

Descriptive and Determinative Mineralogy.

Div. I.

Dickson, C. W., M.A. — Reid, J. A.
McNab, A. J.

Div. II.

Noble, D. S. — McRae, A. D., B.A.
Fairlie, M. F. — Reid, G. C.

Div. III.

Workman, C. W. — Camsell, C.
Redmond, A. V.

Geology—Second Year.

Div. I.

Dickson, C. W., M.A. — McNeil, W. K.

Div. II.

Devitt, G. H. / Wilgar, W. P. — Finlayson, M. D. / Stilwell, A. J.
McDiarmid, S. S. — McCallum, H. E., B.A.
Mackie, F. H. — Baker, J. C.
McKenzie, G. C. — Jackson, H. G.
Bartlett, J. — Workman, J.

Div. III.

Drummond, L. E. — Malone, E. E.
Mackie, G. A. — Pense, E. H.

Petrography—Third Year.

Div. I.

McNab, A. J. — Reid, J. A.

Div. II.

Dickson, C. W., M.A.
Fairlie, M. F.
Workman, C. W.
Reid, G. C.
Noble, D. S.

Div. III.

Grover, G. A.
McRae, A. D., B.A.

Geology of Canada.

Div. II.

Reid, J. A.
McNab, A. J.
Dickson, C. W., M.A.
Murray, J. C.
Workman, C. W.
Fairlie, M. F.

Div. III.

Grover, G. A.
Noble, D. S.

Economic Geology.

Div. I.

Dickson, C. W., M.A.
Reid, J. A.
Fairlie, M. F.
McNab, A. J.

Div. II.

Noble, D. S.
Workman, C. W.
Murray, J. C., B.A.

Div. III.

McRae, A. D., B.A.
Reid, G. C.
Silver, L. P.
Redmond, A. V.

Geology—Fourth Year.

Div. II.

Fraleck, E. L., B.A.
Camsell, C., B.A.

Ore Dressing—Third Year.

McNab, A. J.
Fairlie, M. F.
Noble, D. S.
Pense, E. H.
Reid, J. A.
Stilwell, A. J
Workman, C. W.
Silver, L. P.

Mining—Third Year.

Reid, J. A.
Noble, D. S.
Workman, C. W.
Silver, L. P.
Stilwell, A. J.
Reid, G. C.
Grover, G. A.
Redmond, A. V.
Pense, E. H.

Metallurgy—Third Year.

McNab, A. J.
Fairlie, M. F.
Noble, D. S.
Grover, G. A.
Reid, J. B.
Stilwell, A. J.
Silver, L. P.
Pense, E. H.
Reid, G. C.
Workman, C. W.

Mining—Fourth Year.

Rawlins, J. W.

Metallurgy—Fourth Year.

Rawlins, J. W.

Materials of Construction—Second Year.

Div. I.

McCallum, H. E., B.A.
Henderson, E. W.
Wilgar, W. P.
McDiarmid, S. S. R.
Gordanier, W. N.
Finlayson, M. D.

Div. II.

Mackie, F. H.
Rose, S. L. E.
Jackson, H. G.
Bartlett, James
Craig, H. B. R.
Webster, A. R.
Baker, J. C.

Div. III.

Malone, E. E.
Mackenzie, G. C.
Mackie, G. A.
Chaplin, G. W.
Drummond, L. E.

Electrical Engineering—Third Year.

Div. II.

Grover, G. A.
McNab, A. J.

Div. III.

Fairlie, M. F.
Dwyer, E. T.

Electrical Engineering—Fourth Year.

Div. I.

Baker, H. S.

Structural Engineering—Third Year.

Div. I.

Baker, H. S.

Div. III.

Grover, G. A.
Dwyer, E. T.

Thermodynamics—Third Year.

Div. I.

Baker, H. S.

Div. III.

Dwyer, E. T.

Hydraulics—Fourth Year.

Div. I.

Baker, H. S.

Div. II.

Rawlins, J. W.

Machine Design—Fourth Year.

Div. I.

Baker, H. S.

Div. III.

Sutherland, E.

Drawing I.

Div. I.

McKay, R. B.
Wilson, E. E.
McCallum, H. E., B.A.
McRae, A. D., B.A.
Baker, M. B., B.A.

Div. II.

Corkill, E. T.
Aykroyd, F. W.
Wright, A.
Smythe, W. L.
Devitt, G. H.
Anglin, C. S.
Strachan, B. O.
Reid, F. D.
Squire, R.
Watt, J. W.
Belfour, H. M.
Wagar, C. M.
Anson-Cartwright, R. H. M.
Webster, A. R.
McKenzie, G. C.

Div. III.

Keith, G. C.
Gilbert, F.
Harper, W. B.
Drummond L. E.
Tett, B.
Chapelle, J. W. S.
Hunt, H. R.
Murray, J. C., B.A.
McNeill, W. K.

Drawing II.

Div. I.

Gordanier, W. N.

Div. II.

Rose, S. L.
Henderson, E. W.
McDiarmid, S. S.
Chaplin, G. W.
Bartlett, James.
Jackson, H. G.

Wilgar, W. P.
Mackie, F. H.
Thompson, Arthur.
Baker, J. C.

Div. III.

Workman, J. K.

Anglin, C. S.
Malone, E. E.

Surveying I.

Div. I.

McKay, R. B.
McCallum, H. E., B.A.
Wilson, E. E.
MacNeill, W. K.

Corkill, E. T.
Dickson, C. W., M.A.
McRae, A. D., B.A.
Aykroyd, F. W.

Div. II.

Squire, R. L.
Wright, A.
McKenzie, G. C.

Stilwell, A. J.
Harper, W.
Keith, G. C.

Div. III.

Belfour, H. M.
Strachan, B. O.
Horsey, G. F.
Clark, C. M.

Gilbert, F.
Anson-Cartwright, R. H. M.
Wagar, C. M.

Surveying II.

Div. I.

McDiarmid, S. S. R.
Jackson, H. G.

Wilgar, W. P.

Div. II.

Bartlett, James.
Baker, J. C.
Drummond L. E.

Finlayson, M. D.
Mackie, F. H.
Malone, E. E.

Div. III.

Workman, J. K.
Chaplin, G. W.
Grover, G. A.
Craig, H. B. R.

Knight, C. W.
Mackie, G. A.
Chapelle, J. W. S.

Surveying III.

Div. I.

Rawlins, J. W.
McNab, A. J.

Workman, C. W.

Div. II.

Noble, D. S. Fairlie, M. F.

Div. III.

Grover, G. A. Silver, L. P.

Mechanical Laboratory—First Year.

Aykroyd, W.
Anson-Cartwright, R. H. M.
Belfour, H. M.
Clark, C. M.
Craig, H. B. R.
Corkill, E. T.
Devitt, G. H.
Gilbert, F.
Horsey, G. F.
Harper, W. B.
Keith, G. C.
McCallum, H. E., B.A.
McKay, R. B.
McKenzie, G. C.
Pense, E. H.
Strachan, B. O.
Squire, R.
Smyth, W. L.
Watt, J. W.
Wagar, C. M.
Webster, A. R.
Wilson, E. E.
Wright, A.

Second Year.

Baker, J. C.
Bartlett, J.
Chaplin, G. W.
Drummond, L. E.
Dwyer, E. T.
Finlayson, M. D.
Gordanier, W. N.
Henderson, E. W.
Hunt, F. H.
Jackson, H. G.
Malone, E. E.
Mackie, F. H.
McDiarmid, S. S.
Rose, S. L.
Thompson, A. T.
Sutherland, E.
Wilgar, W. P.
Workman, J. K.

THEOLOGY.

MATRICULATION (NOV. 1900).

Solandt, D. M., B.A.
Fotheringham, R. H.
Moore, W.

SUPPLEMENTARY (NOV. 1900).

Pass.

Apologetics (1899-'00).

McConnell, J. A. Brokenshire, W.

New Testament Exegesis.

Brokenshire, W.

Systematic Theology.

Brokenshire, W.

B. D.

Systematic Theology.

Wallace, James, M.A. Byrnes, J. D., B.A.
Guy, W. A., B.A.

Apologetics.

Guy, W. A., B.A. Byrnes, J. D., B.A.

New Testament Exegesis.

Fraser, Thurlow, B.A. Byrnes, J. D., B.A.
Guy, W.A., B.A.

Old Testament Exegisis.

Guy, W..A., B.A.

Church History.

Fraser, Thurlow, B A. Byrnes, J. D., B.A.
Guy, W. A., B.A.

PASS EXAMINATIONS (APRIL, 1901).

Systematic Divinity—First Year.

Div. II.

Pringle, Geo. E., B.A. McLeod, K. C.
Solandt, D. M., B.A. Crawford, W. F., B.A.
McKinnon, A. G., B.A.

Div. III.

Moore, W. Fotheringham, R. H.

Second Year.

Div. I.

Fraser, Thurlow, B.A. Ferguson, T. J. S., B.A.

Div. II.

McConnell, J. A. Gray, J. M.
Purvis, W., B.A. Edmison, G. A., B.A.
Miller, J. F., B.A.

Div. III.

McMillan, A., B.A. Goodwill, T. W., B.A.
McIntyre, W. C., B.A. Pocock, C.

Third Year.

Div. I.

Wallace, J., M.A. Anthony, J., M.A.
Leckie, N. M. Byrnes, J. D., B.A.
McDonald, W., B.A. Guy, W. A., B.A.

Div. II.

McLaren, W. W., M.A.
Henderson, M.

Apologetics.

Div. I.

Anthony, J., M.A.
Pringle, G. E., B.A.
Solandt, D. M., B.A.
Purvis, W., B.A.
McConnell, J. A.
McKinnon, Geo., B.A.
McLeod, K. C.
McLaren, W. W., M.A.

Div. II.

Millar, J. F., B.A.
McIntyre, W. C., B.A.
Edmison, Geo., B.A.
Crawford, W. F., B.A.
Pocock, C.
Leckie, N. M.
McMillan, A., B.A.
Goodwill, T., B.A.

Div. III.

Moore, W.

New Testament, Criticism and Exegesis.

Div. I.

Wallace, Jas., M.A.
McDonald, W., B.A.
McKinnon, M. A., M.A.
Anthony, Jas., M.A.
McMillan, A., B.A.

Div. II.

Ferguson, T. J. S., B.A.
Purvis, W. W., B.A.
Guy, W. A., B.A.
Byrnes, J. D., B.A.
Pringle, Geo.
Fraser, Thurlow, B.A.
Gray, J. M.
Lekie, N. M.
Edmison, G., B.A.
Miller, J. F., B.A.
Solandt, D. M., B.A.
Moore, W.
McIntyre, W. C., B.A.

Div. III.

McConnell, J. A.
Henderson, M.
McLaren, W. W., M.A.
Edmison, J. H., B.A.
McLeod, K. C.
Goodwill, T. W., B.A.
Pocock, C. E.

SUPPLEMENTARY (1899-1900)

Junior Hebrew.

Petrie, J. A., B.A.
McKinnon, A. G., B.A
McLennan, G. B., B.A.
Whiting, C. C.
McEachern, J. W.
Borley, H. D.
Ferguson, J. W.
Fowlie, A. J., B.A.
Hunter, H. S.
Mahaffy, F. W.
Crawford, W. F., B.A.
Leitch, Alex.
Munro, G.

Senior Hebrew.

Leckie, N. M,
McKinnon, M. A., M.A.
McLaren, W. W., M.A.
Fraser, Thurlow, B.A.
Watts, John, B.A.
Millar, J. F., B.A.
Ferguson, T. J. S., B.A.
Edmison, G., B.A.
McConnell, J. A.
Anthony, Jas., M.A.
McMillan, A., B.A.
McIntyre, W. C., B.A.
Henderson, M.,
Pocock, C. E.,
Goodwill, T. W., B.A.
Solandt, D. M., B.A.

SUPPLEMENTARY (1899-1900)

Brokenshire, W.

Old Testament Criticism and Exegesis.

FIRST YEAR.

Div. I.

Solandt, D. M., B.A.

Div. II.

Pringle, G., B.A.
McKinnon, A. G., B.A.

Div III.

Fotheringham, R. H.
Moore, W.

SECOND YEAR.

Div. I.

Fraser, Thurlow, B.A.

Div. II.

Millar, J. F., B.A.
Ferguson, T. J. S., B.A.
McConnell, J. A.
Edmison, G., B.A.

Div. III.

Goodwill, T. W., B.A.
McIntyre, W. C., B.A.
Purvis, W. W.
McMillan, A., B.A.

THIRD YEAR.

Div. I.

Wallace, J., M.A.
McDonald, W., B.A.
Leckie, N. M.
McLaren, W. W., M.A.
Guy, W. A., B.A.
McKinnon, M. A., M.A.

SUPPLEMENTARY (1899-1900).

Purvis, W. W.
Edmison, G., B.A.
McIntyre, W. C., B.A.

History of Doctrine.

FIRST YEAR.

Div. II.

Pringle, G., B.A.
Moore, W.
Solandt, D. M., B.A.

Div. III.

McLeod, K. C.

SECOND YEAR.

Div. I.

Fraser, T., B.A.

Div. II.

Ferguson, T. J. S., B.A.
Millar, J. F., B.A.
McConnell, J. A.

Div. III.

Edmison, G., B.A.
McMillan, A., B.A.

THIRD YEAR.

Div. I.

Wallace, James, M.A.
Leckie, N. M.

Div. II.

McDonald, W., B.A.
Guy, W. A., B.A.
McLaren, W. W., M.A.
Anthony, James, M.A.
Byrnes, J. D., B.A.
Henderson, M.

Church History.

FIRST YEAR.

Div. I.

Pringle, George, B.A.
Moore, W.

Div. II.

Solandt, D. M., B.A.
McLeod, K. C.

Div. III.

Fotheringham, R. H.

SECOND YEAR.

Div. I.

Fraser, T., B.A.
Ferguson, T. J. S., B.A.

Div. II.

Edmison, George, B.A.
Millar, J. F., B.A.
McMillan, A., B.A.

Div. III.

Goodwill, T., B.A.
McIntyre, W. C., B.A.
McConnell, J. A.
Pocock, C. E.

THIRD YEAR.

Div. I.

Leckie, N. M.
Wallace, J., M.A.
McLaren, W. W., M.A.
McDonald, W., B.A.
Guy, W. A., B.A.
Byrnes, J. D., B.A.
Anthony, James, M.A.

Div. III.

Henderson, M.

Honours.

Leckie, N. M.
Fraser, T., B.A.

PASSED FOR B. D.

Comparative Religion.

Byrnes, J. D., B.A.
Guy, W. A., B.A.
McDonald, W., B.A.
McLean, J. H., B.A. (Rev.)
Wallace, Jas., M.A.

Holy Scripture (Special).

McLean, J. H., B.A. (Rev.)

Holy Scripture (General).

McLean, J. H., B.A. (Rev.)
Leckie, N. M.

Apologetics.

McLean, J. H., B.A. (Rev.)

Systematic Theology.

McDonald, W., B.A.

Old Testament Exegesis.

Byrnes, J. D., B.A.
Guy, W. A., B.A.
McDonald, W., B.A.
Wallace, Jas., M.A.

Old Testament Literature.

Hunter, R. F., B.A. (Rev)

Old Testament Canon—Amos.

Leckie, N. M.

Old Testament Canon.

Hunter, R. F., B.A., (Rev.)

Old Testament Criticisms, Etc.

Amos.

Leckie, N. M.
Wallace, James, M.A.
Macdonald, W., B.A.
Byrnes, J. D., B.A.

The Canon.

Wallace, James, M.A.
Leckie, N. M.

Macdonald, W., B.A.
Hunter, R. F., B.A., (Rev

Job.

Wallace, James, M.A.
Macdonald, W., B.A.

Byrnes, J. D., B.A.

Aramaic.

Wallace, James, M.A.

Macdonald, W., B.A.

MEDICINE.

I. SUMMER SESSION, 1900.

Botany.

Dalton, G. F.
McLellan, C.
Ash, A. F.
Porteous, C. A.
Woodruff, G. A.

Nash, P. I.
Bowie, H. A.
Thompson, E. J.
Macdonald, Ae.

Eye, Ear, Nose and Throat.

Redmond, W. C.

Genge, T. S.

Sanitary Science.

Bowie, H. A.
Grimshaw, W. S.
Redmond, W. C.
Paul, H. E.
Genge, T. S,
Young, M. R.
Clarke, J. T. A.
Tyner, W. G.
Carr-Harris, F. F.
Thompson, E. J.

Ash, A. F.
Macdonald, Ae.
McLellan, C.
Porteous, C. A.
Graham, D.
Densmore, L. D.
Gray, D.
Nash, P. I.
Smith, D. T.

Bacteriology.

Honours.

Grimshaw, W. S.
Bowie, H. A.
Young, M. R.

Genge, T. S.
Paul, H. E., B.A

Pass.

Woodruff, G A.
Redmond, W. C.
Thompson, E. J.
Carr-Harris, F. F.
Ash, A. F.
Macdonald, Ae.

Clarke, J. T. A.
Densmore, L. D.
Graham, D.
Porteous, C. A.
Smith, D. T.
McLellan, C.

II. SUPPLEMENTARY EXAMINATIONS, SEPTEMBER, 1900.

Junior Anatomy.

Densmore, L. D.

Junior Chemistry.

McIntosh, G. E.

Senior Anatomy.

Densmore, L. D.

Junior Practice of Medicine.

Smith, D. T.

Jurisprudence.

Smith, D. T.

Senior Practice of Medicine.

Ford, C. Y. Ash, A. F.

Senior Surgery.

Ford, C. Y.

Clinical Medicine.

Ford, C. Y. Ash, A. F.

Clinical Surgery.

Ford, C. Y.

Senior Obstetrics and Gynaecology.

Ford, C. Y. Curtin, T. V.
Hurdman, A. G.

Senior Medical and Surgical Anatomy.

Ford, C. Y.

III.—PASS EXAMINATIONS, MARCH 1901.

Physics.

Tandy, H.	Gallivan, J. V.
McGonigle, M.	McDonald, H. A.
Robinson, E. J.	Presseau, J. W.
Dear, C. B.	Costello, T. J.
Bennett, A. E. H.	Brown, W. B.
Sproule, E. W.	Caskey, J. C.
Manion, R. J.	Hamm, A. C.
Carruthers, J. S.	Reid, G. R.
Goodfellow, J. R.	Ballantyne, W. H.
Falkner, A. D.	Bennett, H. J.
McCullough, F. C.	Ferguson, A. A.
Rutledge, S. H.	Gillespie, J. J.
Mackerras, R. H.	Kinsley, F.
Connolly, A. K.	Labrosse, J. L. A.
Van Ness, C. S.	Lalonde, A. J.

Junior Anatomy.

Tandy, H.
Bennett, A. E. H.
McCullough, F. C.
McGonigle, M.
Manion, R. J.
DeLong, E. W.
Murphy, W. S.
Van Ness, C. S.
Falkner, A. D.
Bennett, H. J.
Carruthers, J. S.
Gallivan, J. V.
Robinson, E. J.
Brown, W. C.
Caskey, J. C.
Gibson, W.
Singleton, A. H.
McKenzie, R. P.
Austin, C. J.
Hamm, B. N.
McDonald, H. A.
Halliday, R. W.
Lalonde, A. J.
Reid, Victoria

Ballantyne, W H.
Goodfellow, J. R.
McDowall, J. L.
Gillespie, J. J.
Hamm, A. C.
Tyner, S. E.
Weedmark, G. H.
Connolly, A. K.
Sproule, E. W.
Dear, C. B.
Rutledge, S. H.
McGreer, C. G.
Gray, T. J.
Costello, T. J.
Presseau, J. W.
Ferguson, A. A.
Kinsley, F.
Labrosse, J. L. A.
Ferguson, E. A.
Mackerras, R. H.
Reid, G. R.
Stewart, J. A.

Animal Biology and Junior Physiology.

McKenzie, R. P.
McGonigle, M.
Bennett, A. E. H.
Tandy, H.
Carruthers, J. S.
Robinson, E. J.
Hamm, A. C.
Manion, R. J.
Brown, W. C.
Gallivan, J. V.
Reid, Victoria
Dear, C. B.
Ballantyne, W. H.
Singleton, A. H.
Caskey, J. C.
McDonald, H. A.
Bennett, H. J.
Gibson, W.
Van Ness, C.S.

McCullough, F. C.
Pannell, W. L.
Weedmark, G. H.
Goodfellow, J. R.
Rutledge, S. H.
Reid, G. R.
Falkner, A. D.
Sproule, E. W.
Connolly, A. K.
Hamm, B. N.
Costello, T. J.
DeLong, E. W.
Ferguson, A. A.
Lalonde, H. A.

Junior Chemistry.

Brown, W. C.
Tandy, H.
McGonigle, M.
Gibson, W
McCullough, F. C.
Bennett, A. E. H.
Costello, T. J.
Manion, R. J.
Robinson, E. J.
Gallivan, J. V.
Van Ness, C. S.
Sproule, E. W.
Hamm, A. C.
Caskey, J. C.
Reid, G. R.
Rutledge, S. H.
Falkner, A. D.
Tyner, S. E.
Gillespie, J. J.
Kinsley, F.
Dear, C. B.
Gray, T. J.
McCarthy, H.
Ferguson, E. A.
Dawson, J. K.
Bennett, H. J.
DeLong, E. W.
Driscoll, A. C.
McDonald, H. A.
Ballantyne, W. H.
Ferguson, A. A.
Lalonde, A. J.

Junior Materia Medica.

Dickey, J. S.
Knox, W. J.
Reid, G. M.
Laidlaw, J. H.
Leonard, A. H.
MacMillan, A. E.
McKinley, W. W.
Cryan, J. H.
Hamm, B. N.
Kane, J. L.
Ward, G. H.
Singleton, A. H.
Murphy, W. S.
McGreer, C. G.
Robinson, E. J.
Tandy, H.
Moore, H. M.
Gibson, H. A.
McCambridge, J. E.
McDowall, J. L.
Shirreff, W.
McIntosh, G. E.
Workman, W.
Arthur, S. W.
Aylesworth, F. A.
Haskin, B.
Mylks, L. E.
McCarthy, D. M.
Rutledge, S. H
McDonnell, J. J.
McCarthy, H.
Scott, R. H.
Pannell, W. L.
Austin, C. J.
Fairie, J. A.
Pritchard, J. A.
Mackerras, R. H.
Ellis, F.
Houston, D. H.
Stewart, J. A.
Dawson, J. K.
Ferguson, E. A.
Driscoll, A. C.
Kearns, D. A.
Eshoo, S. O.

Senior Anatomy.

Honour.

Leonard, A. H.
Knox, W. J.
Staley, A. A.
Ward, G. H.
Ellis, F.
McDonell, J. J.
Laidlaw, J. H.
Bell, F. M.
Shirreff, W.
Gibson, H. A.
Houston, D. H.
Kane, J. L.
Pannell, W. L.
McIntosh, G. E.
Reid, G. M.

Pass

Sheffield, E.
Mylks, L. E.
McKinley, W. W.
McCambridge, J. L.
Foley, T. B.
Arthur, S. W.
McCarthy, D. M.
Haskin, B.
Dickey, J. S.
MacMillan, A. E.
McCarthy, H.
Stratton, C. M.
Pritchard, J. A.
Kearns, D. A., B.A.
Wellwood, J. A.
McKechnie, W.
Cryan, J. H.
Orser, T. H.
Dawson, J. K.
Moore, H. M.
Workman, W.

Senior Physiology.

Honours.

Leonard, A. H.
Ward, G. H.
McIntosh, G. E.
Reid, G. M.
Gibson, H. A.
Staley, A. A.
Knox, W. J.
Laidlaw, J. H.
Haskin, B
Arthur, S. W.
Murphy, W. S.

Pass.

Ellis, F.
McDonell, J. J.
McGreer, C. G.
Bell, F. M.
Shirreff, W.
Foley, T. B.
Kane, J. L.
McCambridge, J. E.
Pritchard, J. A.
Workman, W.
Mylks, L. E.
Zwicker, F. G.
Moore, H. M.
Wellwood, J. A.
Cryan, J. H.
Dickey, J. S.
Houston, D. H.
McKinley, W. W.
Pannell, W. L.
Thompson, E. J.
Mackerras, R. H.
MacMillan, A. E.
Aylesworth, F. A.
Carey, N.
Ferguson, E. A.
McCarthy, D. M.
McCarthy, H.
Weatherhead, G. F., B.A.

Histology.

Ward, G. H.
Dickey, J. S.
Haskin, B.
Knox, W. J.
Leonard, A. H.
Murphy, W. S.
Workman, W.
MacMillan, A. E.
Arthur, S. W.
Staley, A. A.
Wellwood, J. A.
Gibson, H. A.
Pritchard, J. A.
Shirreff, W.
Bell, F. M.
Pannell, W. L.
Laidlaw, J. H.
Cryan, J. H.
Ellis, F.
Mylks, L. E.
McDonell, J. J.
McIntosh, G. E.
McCarthy, D. M.
Windell, H. C.
Kane, J. L.
Mackerras, R. H.
McKinley, W. W.
Foley, T. B.
Aylesworth, F. A.
McCambridge, J. E.
Carey, N.
Houston, D. H.
Bleecker, G. H.
McGreer, C. G.
Reid, G. M.
Thompson, E. J.
McCarthy, H.
Moore, H. M.
Ferguson, E. A.
Kearns, D. A.

Senior Chemistry.

Staley, A. A.
Leonard, A. H.
Ward, G. H.
Kane, J. L.
Knox, W. J.
Amos, W. W.
Ellis, F.
Reid, G. M.
Gibson, H. A.
McIntosh, G. E.
McDowall, J. L.
Foley, T. B.
Shirreff, W.
McCarthy, D. M.
Workman, W.
Haskin, B.
McKinley, W. W.
Moore, H. M.
McKenzie, R. P.
Pritchard, J. A.
McCambridge, J. E.
Cryan, J. H.
Thompson, E. J.
Aylesworth, F. A.
Porteous, C. A.
Scott, R. A.
Woodruff, G. A.
Dickey, J. S.
Fahey, E. W.
Fairie, J. A.
Houston, D. H.
Mylks, L. E.
MacMillan, A. E.
McCarthy, H.
McDonnell, J. J.
McKechnie, W.
Pannell, W. L.
Wellwood, J. A.

Practical Chemistry.

Leonard, A. H.
Dickey, J. S.
Moore, H. M.
McKenzie, R. P.
Shirreff, W.
Pannell, W. L.
Pritchard, J. A.
Staley, A. A.
MacMillan, A. E.
McCarthy, H.
McIntosh, G. E.
Workman, W.
Bell, F. M.
Ellis, F.
Fifield, F. J.
McDowall J. L.
Arthur, S. W.
Gibson, H. A.
Kane, J. L.
Reid, G. M.
Mylks, L. E.
Knox, W. J.
Wellwood, J. A.
Ward, G. H.
Aylesworth, F. A.
McCarthy, D. M.
McDonell, J. J.
Scott, R. H
Amos, W. W.
Laidlaw, J. H.
Foley, T. B.
Cryan, J. H.
Houston, D. H.
McCambridge, J. E.
Haskin, B.
McKinley, W. W.

Senior Materia Medica, Therapeutics and Pharmacy.

Honours.

Bell, F. M.
Etherington, E.
Mellow, F. E.
McLaren, T. O.

Pass.

Eshoo, S. O.
Zwicker, F. G.
Mason, W. R.
Staley, A. A.
Stratton, C. M.
Moore, R. G.
Jones, L. W.
Aykroyd, W. H.
Orser, T. H.
Sheffield, E., B.A.
Smith, A. L.
Reid, R. M.
Nash, P. I.
Connell, J. V.
Gage, H. E.
Thompson, E. J.
Amos, W. W.
Mellon, P. B.
McKechnie, W.
Patterson, W. J.
Bleecker, G. H.
Crews, J. W.
Hill, J. T.
Carey, N.
O'Rielly, J. T.

Junior Practice of Medicine.

Hunter, W. R.
Mellow, F. E.
McLaren, T. O.
Mason, W. R.
Merrill, J. W., B.A.
Orser, T. H.

Dalton, G.F., B.A.
St. Remey, C. de.
Richardson, E.
Windell, H. C., M.A.
Etherington, F.
Nash, P. I.
Crews, J. W.
Day, H. E
Amos, W. W.
Stratton, C. M.
Zwicker, F. G.
Hill, J. T.
Jones, L. W.
Bleecker, G. H.
Carr-Harris, F. F.
Patterson, J. W.
Elliott, E. S.
Moore, R. G.
Carey, N.
Kennedy, D. B.
Smith, A. L.
Connell, J. V.
Reid, R. M.
O'Rielly, T. J.
Gage, H. E.
McKechnie, W.
Aykroyd, W. H.
Gray, D. W.

Junior Surgery.

Mellow, F. E.
Dalton, G. F., B.A.
Etherington, F.
Connell, J. V.
Nash, P. I.
St. Remy, C. de
Stratton, C. M.
Windell, H. C.
Zwicker, F. G.
Hill, J. T.
Patterson, W. J.
Amos, W. W.
Hunter, W. R., M.A.
Jones, L. W.
Orser, T. H.
Day, H. E.
Merrill, J. W., B.A.
Mason, W. R.
Reid, R. M.
Carey, N.
Crews, J. W.
Gage, H. E.
McKechnie, W.
McLaren, T. O.
Moore, R. G.
O'Rielly, T. J.
Aykroyd, W. H.
Kennedy, D. B.
Gray, D. W.
Eshoo, S. O.
Haycock, G. W. G.
Bleecker, G. H.

Junior Obstetrics and Pædiatrics.

Hunter, W. R., M.A.
Mellow, F. E.
Mason, W. R.
Windell, H. C.
Dalton, G. F., B.A.
Jones, L. W.
St. Remy, C. de
Bleecker, G. H.
Wheatherhead, G. F., B.A.
Gage, H. E.
McLaren, T. O.
Amos, W. W.
Etherington, F.
Orser, T. H.
Carey, N.
Hill, J. T.
Crews, J. W.
Aykroyd, W. H.
Connell, J. V.
Moore, R. G.
Day, H. E.
Gray, D. W.
Stratton, C. M.
Haycock, G. W. G.
Nash, P. I.
Smith, A. L.
McKechnie, W.
O'Rielly, T. J.
Reid, R. M.

Eshoo, S. O.
Kennedy, D. B.
Merrill, J. W., B.A.
Zwicker, F. G.
Elliott, E. S.
Patterson, W. J.

Junior Medical and Surgical Anatomy.

Mason, W. R.
Mellow, F. E.
St. Remy, C. de
Patterson, W. J.
Amos, W. W.
Hunter, W. R., M.A.
Dalton, G. F., B.A.
Day, H. E.
Smith, A. L.
Gage, H. E.
Jones, L. W.
Sheffield, E., B.A.
Nash, P. I.
Reid, R. M.
Carey, N.
Aykroyd, W. H.
Etherington, F.
Bleecker, G. H.
Connell, J. V.
McLaren, T. O.
Fahey, E. W.
Merrill, J. W., B.A.
Zwicker, F. G.
Hill, J. T.
Orser, T. H.
Windell, H. C., M.A.
Crews, J. W.
O'Rielly, T. J.
Stratton, C. M.
Eshoo, S. O.
Gray, D. W.
Moore, R. G.
Weatherhead, F. G., B.A.
Kennedy, D. B.

Jurisprudence.

Honours.

Dalton, G. F., B.A.
Mellow, F. E.
Windell, H. C., M.A.
Day, H. E.
Laidlaw, J. H.
St. Remy, C. de
Amos, W. W.
Mason, W. R.
Hunter, W. R., M.A.
McLaren, T. O.
Smith, A. L.
Etherington, F.
Jones, L. W.
Moore, R. G.
Nash, P. I.
Sheffield, E., B.A.
Reid, R. M.

Pass.

Connell, J. V.
Zwicker, F. G.
Aykroyd, W. H.
Bleecker, G. H.
Hill, J. T.
Gage, H. E.
Gray, D. W.
O'Rielly, T. J.
Patterson, W. J.
Haycock, G. W. G.
McKechnie, W.
Carey, N.
Crews, J. W.
Eshoo, S. O.
Kennedy, D. K.
Elliott, E. S.

Junior Pathology.

Hunter, W. R., M.A.
St. Remy, C. de
Dalton, G. F., B.A.
Windell, H. C.
McLaren, T. O.
Murphy, W. S.
Orser, T. H.
Amos, W. W.
Gage, H. E.
Jones, L. W.
Day, H. E.
Mason, W. R.
Mellow, F. E.
Zwicker, F. G.
Crews, J. W.
Hill, J. T.
Weatherhead, G. F., B.A.
Smith, A. L.
Haycock, G. W. G.
Connell, J. V.
Etherington, F.
Reid, R. M.
McGreer, C. G.
Bleecker, G. H.
Merrill, J. W., B.A.
Patterson, W. J.
Nash, P. I.
Aykroyd, W. H.
Carey, N.
Kennedy, D. B.
McKechnie, W.
Moore, R. G.
Eshoo, S. O.

Senior Practice of Medicine.

Honours.

Bogart, I. G.
Grimshaw, W. S.
Tyner, W. G., B.A.
Young, M. R.
Paul, H. E., B.A.
Redmond, W. C.
Genge, T. S.
Bowie, H. A.
McCulloch, J.
Densmore, L. D.
Mellon, P. B.
Richardson, E.
Macintyre, A. D.
Fahey, E. W.

Pass.

Thompson, E. J.
Woodruff, G. A.
Macdonald, Ae.
Porteous, C. A.
Lazier, D. B.
Carr-Harris, F. F.
Roy, E.
Smith, D. T.

Clinical Medicine.

Bogart, I. G.
Bowie, H. A.
Grimshaw, W. S.
Genge, T. S.
Macintyre, A. D.
Paul, H. E., B.A.
Redmond, W. C.
Young, M. R.
Densmore, L. D.
Tyner, W. G., B.A
Fahey, E. W.
McCulloch, J.
Macdonald, Ae
Smith, D. T.
Carr-Harris, F. F.
Porteous, C. A.
Richardson, E.
Lazier, D. B.
Roy, E.
Thompson, E. J.
Woodruff, G. A.
Mellon, P. B.
Hanley, G. J.

Senior Surgery.

Honours.

Grimshaw, W. S.
Macintyre, A. D.
Redmond, W. C.
Lazier, D. B.
Genge, T. S.
Bogart, I. G.
McCulloch, J.
Tyner, W. G., B.A.
Bowie, H. A.
Paul, H. E., B.A.
Young, M. R.
Mellon, P. B.
Macdonald, Ae.
Densmore, L. D.

Pass.

Thompson, E. J.
Richardson, E.
Fahey, E. W.
Porteous, C. A.
Roy, E.
Smith, D. T.
Woodruff, G. A.
Carr-Harris, F. F.
Hanley, G. J.

Clinical Surgery.

Bowie, H. A.
Bogart, I. G.
Tyner, W. G., B.A.
Macintyre, A. D.
Grimshaw, W. S.
Richardson, E.
Carr-Harris, F. F.
McCulloch, J.
Genge, T. S.
Fahey, E. W.
Porteous, C. A.
Thompson, E. J.
Densmore, L. D.
Macdonald, Ae.
Paul, H. E., B.A.
Redmond, W. C.
Roy, E.
Hanley, G. J.
Lazier, D. B.
Smith, D. T.
Mellon, P. B.
Woodruff, G. A.
Young, M. R.

Senior Obstetrics and Gynæcology.

Honours.

Bowie, H. A.
Tyner, W. G., B.A.
Bogart, I. G.
Grimshaw, W. S.
Macintyre, A. D.
Young, M. R.
Redmond, W. C.
Paul, H. E., B.A.
Genge, T. S
McCulloch, J.

Pass.

Macdonald, Ae.
Thompson, E. J.
Fahey, E. W.
Carr-Harris, F. F.
Roy, E.
Densmore, L. D.
Richardson, E.
Lazier, D. B.
Mellon, P. B.
Hanley, G. J.
Porteous, C. A.
Smith, T. D.

Senior Medical and Surgical Anatomy.

Honours.

Bogart, I. G.
Tyner, W. G., B.A.
Bowie, H. A.
Grimshaw, W. S.
Genge, T. S.
Macintyre, A. D.
Richardson, E.

Pass.

Redmond, W. C.
Densmore, L. D.
McCullough, J.
Young, M. R.
Paul, E. H., B.A.
Thompson, E. J.
Hanley, G. J.
Lazier, D. B.
Fahey, E. W.
Carr-Harris, F. F.
Roy, E.
Macdonald, Ae.
Porteous, C. A.
Smith, D. T.
Mellon, P. B.

Senior Pathology.

Honours.

Bogart, I. G.
Grimshaw, W. S.
Bowie, H. A.
Tyner, W. G., B.A.
Redmond, W. C.
Young, M. R.
Macintyre, A. D.
Richardson, E.
Genge, T. S.
Densmore, L. D.

Pass.

Thompson, E. J.
Paul, H. E.
McCulloch, J.
Macdonald, Ae.
Mellon, P. B.
Fahey, E. W.
Lazier, D. B.
Porteous, C. A.
Woodruff, G. A.
Roy. E.
Carr-Harris, F. F.
Hanley, G. J.
Smith, T. D.

Bacteriology.

Tyner, W. G., B.A.
Nash, P. I.
Roy, E.

Sanitary Science.

Roy, E.

Diseases of the Eye, Ear, Nose and Throat.

Grimshaw, W. S.
McCulloch, J.
Densmore, L. D.
Connolly, E. W.

LIST OF STUDENTS.

SESSION 1900-1901.

IN ARTS.

NAME.	Year of Attendance.	Summer Residence.	Where Educated.
Aikin, J. A.....	3	Hamilton.....	Orangeville H. S.
Allen, John.....	2	Napanee.....	Napanee C. I.
Allison, Mary	4	Adolphustown.....	Picton H. S.
Anderson, P. McC.	3	Belleville.....	Belleville H. S.
Armour, Amy A....	2	Almonte.....	Lindsay C. I.
Asselstine, Fran.M.	4	Kingston.....	Kingston C. I.
Ayers, Marion H...	1	Leduc, N.W.T.....	Beamsville, H. S.
Aylesworth, F. L...	4	Kingston.....	Kingston C. I.
Bailie, A. A.....	2	Billing's Bridge.....	Ottawa C. I.
Baines, A. W.....	1	Wiarton	
Bajus, Carrie.....	6	Kingston.....	Kingston C. I.
Barker, J.....	4	Lake Talon.....	Richmond, West-minster
Bates, C. J. L.....	4	Portsmouth.....	Vankleek Hill H. S.
Beckett, S. E. J.....	3	Listowel.....	Goderich C. I.
Bennett, Marg't V..	5	Lindsay	Omemee H. S.
Bennett, W. H.....	4	Almonte.....	Almonte H. S.
Bennett, W. L.....	1	Port Hope.....	Port Hope H. S.
Best, Isabel M.....	4	Peterboro.....	Peterboro C. I.
Beveridge, R. W...	1	Port Elmsley.....	Smith's Falls H. S.
Billings, T. H	4	Lyn	Brockville C. I.
Birch Beatrice D...	2	Kingston.....	Kingston C. I.
Black, B. S.....	2	Kingston.....	Kingston C. I.
Black, Jean B.....	6	Hamilton.....	Hamilton C. I.
Bloor, W. R	3	Ingersoll.....	Ingersoll H. S.
Boland, W. A	1	Micksburg.....	Renfrew H. S.
Bolton, L. L.....	3	Portland.....	Athens H. S.
Borley, H. D.....	3	Mount Brydges.....	Strathroy C. I.
Boyd, Agnes.....	3	Kingston.....	Kingston C. I.
Boyd, A. Montrose	4	Dresden	Harriston H. S.
Boyd, R. M.....	1	Belleville.....	Albert College.
Branscombe, M. E.	4	Picton	Albert College.
Brick, N. W..... .	4	Kingston.....	Hamilton C. I.
Bright, A.....	1	Montreal.....	Montreal H. S.
Britton. A. H.....	2	Kingston.....	Kingston C. I.
Brokenshire, W. H..	6	Toronto.....	Kingston C. I.
Brown, T.....	1	Kingston.....	

NAME.	Year of Attendence.	Summer Residence.	Where Educated.
Brown, D.....	1	Bradford.....	Aylmer C. I.
Brown, G. A.....	2	Oak Grove.....	Renfrew H. S.
Brown, H. W.....	2	Berlin, Ont.....	Harriston H. S.
Brown, J. W.....	4	Hanover.....	Owen Sound C. I.
Brown, P. W.....	3	Newburgh.....	Smith's Falls, H. S.
Brown, T. C.....	5	Maitland.....	Almonte H. S.
Brown, W. T.....	4	Toronto.....	Carleton Place C. I.
Bryant, Jas. F.....	4	Prince Albert, Sask.,	St. Catharines C.I.
Bryson, Isabel.....	2	Kingsmere, Que.....	Ottawa Ladies' College
Brydon, Robt.....	1	Oustic.....	Guelph C. I.
Buchanan, Mabel A.	1	Lanark.....	Lanark P. S.
Burr, Lenne.....	2	Ameliasburg.....	Albert College.
Byers, D. R.....	6	Gananoque.....	Gananoque H. S.
Caldwell, Daisy C..	5	Sydenham.....	Sydenham H. S.
Caldwell, J. A.....	4	Watson's Corners...	Almonte H. S.
Caldwell, J. S.....	3	Watson's Corners...	Almonte H. S.
Caldwell, O. Max...	1	Lanark.....	Lanark P. S.
Calvin, D. D.....	3	Kingston.....	Woodstock College.
Calvin, Marion.....	4	Kingston.....	Moulton College.
Cameron, A. E.....	2	Wemyss.....	Perth C. I.
Cameron, A. R.....	2	Morrisburg.....	Morrisburg C. I.
Campbell, A. L.	1	Fergus.....	
Campbell, D.....	1	Egansville.....	Renfrew H. S.
Cannon, J. D.....	4	London, W.C., Eng.,	Kingston C. I.
Cattanach, Jessie S.	1	Williamstown.....	Williamstown H. S.
Chambers, L. P....	1	(Bardezag, Ismidt,..	(Robert College,
Chambers, R.....	3	Turkey in Asia).....	Constantinople.
Chant, W.....	2	Chantey.....	Brockville C. I.
Charlesworth, J.W.	4	Guelph.....	Private tuition.
Closs, F. D.....	3	Victoria Road.....	Aylmer C. I.
Clark, Grace.....	2	London, Ont.....	Kingston C. I.
Coad, Edith L.....	3	Brockville.....	Brockville C. I.
Colwill, L. H.....	1	Nepigon.....	Clinton C. I.
Connolly, A. K.....	4	Cataraqui.....	Private.
Cook, Gertrude A..	3	Stratford.....	Stratford C.I.
Cooke, W. J.....	1	Cataraqui.....	Kingston C. I.
Cooper, A. B.....	3	Branchton.....	Parkdale C. I.
Cowan, S. G.....	4	Peterboro.....	Peterboro C. I.
Cumming, Lucy....	3	Lyn.....	Brockville C. I.
Cummings, W.....	1	Cornwall.....	Cornwall H. S.
Dadson, E. E.....	2	Wallaceburg.....	St. Thomas C. I.
Dadson, Helena....	1	Stayner.....	St. Thomas C. I.

NAME.	Year of Attendance.	Summer Residence.	Where Educated.
Darroch, W. F.....	2	Brantford.....	Harriston H. S.
Dickson, M. Evelyn	3	Kingston.....	Kingston C. I.
Dingwall, Annie C.	2	Cornwall.....	Cornwall H. S.
Dingwall, J.....	2	"	" "
Dingwall, M	2	"	" "
Donnell, J. A.....	4	Beaverton	Lindsay C. I.
Donovan, Gert. A..	6	Kingston.....	Kingston C. I.
Down, G. W.....	2	Nober.....	Charing National.
Duff, K. Isobel.....	2	Otonabee	Peterboro C. I.
Duncan, T.....	2	Westport.....	Athens H. S.
Dunkley, W. G.....	3	Picton	Napanee C. I.
Dunlop, S.....	2	Ventnor	Kemptville H. S.
Dwyer, E.....	1	Kingston	Kingston C. I.
Dwyer, J. G.....	2	"	" "
Eastman, F. S.....	2	Eramosa.....	Smithville H. S.
Elder, C. Hosie.....	1	Elder's Mills.....	Weston H. S.
Eldon, R. H.....	4	Toronto.....	
Ellicott, T. W. H...	4	Montreal.....	Montreal H. S.
Ellis, George E.....	4	Ellisville	Athens H. S.
Embury, Allen E...	2	Brampton	
English, J. W.....	4	Mimico	Iroquois H. S.
Errett, Bessie D....	1	Detroit, Mich.....	Chatham C. I.
Ewing, Florence M.	3	Cataraqui.....	Athens H. S.
Fairlie, J.....	2	Kingston.....	Brockville C. I.
Fenwick, Chrissie...	3	Kingston.....	Kingston C. I.
Ferguson, John.....	2	.....	London C. I.
Ferguson, J. Y.....	3	Admaston	Renfrew H. S.
Ferguson, T. R.....	1	Wiarton.....	Wiarton H S.
Ferrier, G. C.....	1	Kingston.....	Kingston C. I.
Fetterly, H. B.	1	Winchester	Morrisburg C. I.
Flath, Emma S.....	3	Kingston.....	Kingston C. I.
Fleming, A. G.....	1	Craigleith.....	Collingwood C. I.
Fleming, Maude E.	3	"	" "
Fleming, W. S.....	2	Franktown	Smith's Falls H. S.
Fletcher, W. H.....	4	Stratford.....	Owen Sound C. I.
Flynn, T. Arthur....	2	Morrisburg.....	Morrisburg C. I.
Foik, H. J.....	3	Colborne.....	Stratford C. I.
Forfar, Lena M.....	1	Ellesmere.....	Markham H. S.
Fotheringham, R.H	4	Rothsay.....	Private.
Fowlie, A. J.....	4	Erin	Paris H. S.
Fraser, G. E.....	1	Picton	Picton H. S.
Fraser, Helen F.....	3	Hamilton	Hamilton C. I.

NAME.	Year of Attendance.	Summer Residence.	Where Educated.
Fraser, Jane A.....	2	Kingston.....	Pembroke H. S.
French, C. A.....	1	Pickering.....	Pickering College.
Froats, W. C.....	3	Morrisburg.....	Morrisburg C. I.
Galbraith, T. M....	1	Hamilton.....	Meaford, H. S.
Gandier, J. C.....	3	Newburgh	Napanee C. I.
Garland, F. A.....	1	Mansonville, Que...	McGill Normal Sch.
Gavin, W. F.....	1	Melcombe.....	Brockville C. I.
Gibson, A. S.....	1	Kingston	Kingston C. I.
Gibson, Ethel B....	2	Kingston	Kingston C. I.
Gillies, J. S.....	6	Braeside.....	Carleton Place C.I.
Girvin, H. G.....	5	Kingston	Kingston C. I.
Glover, H.....	1	Camden East.....	Newburgh H. S.
Glover, W. R.....	1	Camden East.....	
Gober, J. Eva.....	1	Atlanta, Ga.....	Washington Sem.
Graham, C. W.....	2	Kingston	Kingston C. I.
Graham, Elsie K...	3	Kingston	Kingston C. I.
Graham, R. R.....	3	Bowell	Athens H. S.
Grant, Ethel I.....	2	Martintown.....	Williamstown H.S.
Grant, J.....	3	Brockville.....	Brockville C. I.
Graves, Maud A. H	2	Kingston	Kingston C. I.
Grenfell, Marion M.	3	Arnprior.....	Kingston C. I.
Grey, Stearns.....	2	Athens.....	Athens H. S.
Griffin, A. D.....	4	Woodstock	
Hagan, J. W.....	2	Walsingham Ctre...	Brantford C. I.
Hagar, A. E.....	4	Brome, Que.....	Athens H. S.
Hainer, F. L.....	1	Stouffville.....	Markham H. S.
Halladay, R. W.....	3	Elgin	Athens H. S.
Hamilton, W. J.....	2	Cobourg.....	Cobourg C. I.
Harpell, J. J.....	3	Inverary	Sydenham H. S.
Harrison, F. W.....	1	Richmond Hill.....	Richmond H. S.
Harten, G. H.....	4	North Pownal, Vt...	Gouverneur Sem.
Hazlett, J H.....	4	Kingston	Kingston C. I.
Henderson, M.....	4	Glenallan	Private Tuition.
Hendry, Annie S...	2	Hamilton.....	Hamilton C. I.
Herchmer, Ethel M.	4	Kingston	Kingston Ladies' C.
Hewton, Gertrude	3	Kingston	Kingston Ladies' C.
Hiscock, Reta W...	1	Kingston	Kingston C. I.
Hoppin, L. W.....	4	Kingston	Kingston C. I.
Holmes, F. W.....	2	Kingston	Kingston C. I.
Holmes, G. E.....	1	Athens, Ont.....	Athens H. S.
Horsey, Florence M.	4	Kingston	Kingston C. I.
Houston, D. W.....	1	Stratford	

NAME.	Year of Attendance.	Summer Residence.	Where Educated.
Huff, S.	5	Meaford	Private.
Hunt, Sarah A.	1	Packenham	Almonte H. S.
Hunter, H. S.	3	Smith's Falls	Smith's Falls H. S.
Hutchison, J. H.	3	Amherstburg	Orillia H. S.
Hutchison, R. A.	1	Walsingham Ctre	Aylmer C. I.
Jackson, V. W.	2	Fulton	Hamilton C. I.
Jewitt, T. J.	2	Campbell's Cross	Brampton H. S.
Johnson, D. B.	4	West Lorne	Glencoe H. S.
Jones, J. E.	1	Peterboro	Collingwood C I.
Kennedy, A.	4	Agincourt	Markham H. S.
Kennedy, A. H.	2	Bath	Napanee C. I.
Kerr, T. R.	1	Portsmouth	Kingston C. I.
Keys, S. J.	3	Vankleek Hill	Morrisburg C. I.
Kidd, C. E.	3	Munster	Carleton Place H.S.
Kidd, W. J.	3	Hazeldean	Carleton Place H.S.
Kidd, W. L.	1	Woodbridge	Barrie C. I.
Kingston, E. A.	4	Picton	Picton H. S.
Laidlaw, C.	3	Georgetown	Georgtown H. S.
Laing, Maybelle	2	Kingston	Kingston C. I.
Laird, Annie L.	4	Kingston	Kingston C. I.
Lawlor, R. G.	3	Sydenham	Sydenham H. S.
Lees, W. A.	1	Hamilton	Hamilton C. I.
Leitch, A.	4	Strathroy	Strathroy C. I.
Leitch, G, C.	1	Dutton	Dutton H. S.
Liebner, E.	4	Orillia	Ridgetown H. S.
Lindsay, M. A. F.	1	Lumby, B.C	Coll. of God's Gift Dulwich, Eng.
Losee, J. R.	1	Collins Bay	Kingston C. I.
Loucks, J. E.	4	Frankville	Smith's Falls H. S.
Lowe, W. D.	4	Kingston	Ottawa C. I.
Lowry, Blanche T.	3	Kingston	Kingston C. I.
Mahaffy, F. W.	3	Courtright	Holland, Man.
Mahood, A. E.	2	Kingston	Kingston C. I.
Malone, Vida A.	3	Kingston	Kingston C. I.
Malloch, Eleanor E.	1	Hamilton	Hamilton C. I.
Malloch, G. S.	3	Hamilton	Upper Canada Coll.
Marshall, D. H. J.	1	Campden	St. Catharines C. I.
Mason, G. W.	3	Heathcote	Collingwood C. I.
Matheson, J.	4	Armow	Kincardine H. S.
Maxwell, Mary E.	1	Brockville	Brockville C. I.

NAME.	Year of Attendance.	Summer Residence.	Where Educated.
Meader, F. D.....	1	Orillia.....	Orillia H. S.
Meldrum, G. E.....	2	Fallowfield	Ottawa C. I.
Might, L.....	1	Vankleek Hill.....	Owen Sound C. I.
Miller, Eva M.....	6	Switzerville.....	Napanee C. I.
Miller, F.....	1	Avening.....	Collingwood C. .I
Miller, J. H.....	2	Avening	Collingwood C. I.
Millions, Edna M...	6	Carleton Place.....	Carleton Place C.I.
Milloy, J. G.....	2	West Lorne.....	Dutton H. S.
Mills, Mabel V.....	5	Kingston	Kingston C. I.
Mills, R. M.....	3	Kingston	Kingston C. I.
Milne, M. R.....	4	Kingston	Kingston C. I.
Mitchell, J. V.....	3	Lansdowne.....	Athens H. S.
Montgomery, F. L.	1	Kingston	Kingston C. I.
Moore, J. L.....	5	Toronto.....	Parkdale C. I.
Moore, W.....	5	Carleton Place.....	Carleton Place C.I.
Mothersill, G. S.....	2	Ottawa.....	Private.
Muir, A. W. H.....	2	Gananoque.....	Gananoque H .S.
Mundell, Alma E...	4	Kingston	Kingston C. I.
Munro, G.....	6	Ridgetown.....	Harristown H. S.
Munro, M. F.....	1	Lancaster.....	Williamstown H. S.
Munro, W. A.....	5	Chesterville.....	Kemptville H. S.
Murphy, Isabella...	4	Antrim.....	Almonte H. S.
Murphy, W. E.....	3	Rosemont.....	Collingwood H. S.
Murphy, W. S.....	4	Portland.....	Athens H. S.
Murray, D. C.....	5	Newton.....	Stratford C. I.
McCallum, S.....	2	Brewer's Mills.....	Gananoque H. S.
McConachie, J. C..	3	Cranston.....	Hamilton C. I.
McConkey, K. M.R.	2	Brockville.....	Brockville C. I.
McConnell, Jennie.	3	Dresden.....	Chatham C. I.
McCormack, Irene.	1	Kingston	Kingston C. I.
MacCormack, M....	3	Crieff.....	Galt C. I.
McCormack, S. G..	2	Lyn.....	Brockville C. I.
McCrimmon, A. L.	3	Alexandria.....	Alexandria H. S.
McCutcheon, J. M.	1	St. Thomas.....	Listwell H. S.
McDonald, J. M.....	2	Orangeville	Orangeville H. S.
Macdonnell, L. M..	4	Fergus	Upper Canada Coll.
McDougall, F. H...	3	Maxville.....	Alexandria H. S.
McDougall, H. Lila	2	Richmond West.....	Ottawa C. I.
McEachran, J. M...	4	Glencoe	Glencoe H. S.
McEwen, G. G.....	2	Lakeport.....	.....
Macgillivray, T. D..	3	Kingston	Kingston C. I.
Macgregor, Annie K.	2	Almonte	Almonte H. S.
Macgregor, Grace C.	2	Almonte	Almonte H. S.
McGreer, C. G.....	4	Napanee.....	Napanee C. I.

NAME.	Year of Attendance.	Summer Residence.	Where Educated.
McGuire, J.....	4	Westport.....	Brockville C. I.
McInnes, W. H. E.	3	Vanleek Hill.....	Vanleek Hill H. S.
MacIntosh, J. A.....	4	Minden.....	Lindsay C. I.
McIntosh, P. A.....	4	Dundela.....	Iroquois H. S.
McIntyre, D. N.....	2	Napanee.....	Albert College.
MacIntyre, J. M.....	3	Phoenix, Arizona....	Upper Canada Coll.
Macintyre, N. C.....	2	Toronto	Beamsville H. S.
McKay, J. M.....	1	Kintore.....	Ingersoll and London C. I.
McKechnie, J. B....	1	Wiarton.....	Wiarton H. S.
McKechnie, J. H....	3	Wiarton.....	Wiarton H. S.
MacKinnon, J. D...	4	Lake Ainslie, C.B...	Sydney Academy.
Maclaren, C. H.....	3	Ottawa.....	Whitby C. I.
McLean, N. J.....	4	Pembroke.....	Pembroke H. S.
McLean, R. A.....	2	Smith's Falls.....	Smith's Falls H. S.
McLellan, D.....	1	Renfrew	Pembroke H. S.
McLennan, G. B...	4	Walkerton.....	Walkerton H. S.
McLeod, K. C.....	3	Woodstock	Woodstock H. S.
McLeod, Lola.....	1	Kingston	Kingston C. I.
McNab, Geo. G.....	3	Renfrew.....	Renfrew H. S.
McNab, Lizzie M...	4	Douglas	Renfrew H. S.
Macphail, J. G.....	2	Orwell, P.E.I.....	Prince of Wales Col.
McPherson, E. A...	4	Prescott	Prescott H. S.
MacPherson, Hec'r	2	Grand Valley, Ont..	Orangeville H. S.
Macqueen, M.A.....	2	Orwell.....	Prince of Wales College.
McSporran, J. A....	4	London.....	Brantford C. I.
Newton, Meta.....	3	Deseronto.....	Deseronto H. S.
Nichol, C. O.....	4	Hamilton.....	Hamilton C. I.
Nicolle, F. R.....	2	Kingston	Kingston C. I.
Nixon, Thos.....	4	Smith's Falls.....	
Norton, T. W. F....	2	Listowel.....	Listowel H. S. and Stratford C. I.
Osborne, N. A.....	4	Waterville N.S.....	Dalhousie College.
Ostrom, Ethel L....	1	Alexandria.....	Alexandria H. S.
Patterson, G.....	4	Stella.....	Deseronto H. S.
Patterson, W. R....	3	Kingston.....	Kingston C. I.
Pentland, G. E.....	2	Norwich.....	Collingwood C. I.
Perney, F. E.....	4	Ottawa.....	Hamilton C. I.
Petapiece, A. W....	2	Merrickville.....	Kemptville H. S.
Petrie, J. A.....	4	Belleville.....	Belleville H. S.
Pettit, L. J.....	1	St. Thomas.....	St. Thomas C. I.

NAME.	Year of Attendance.	Summer Residence.	Where Educated.
Philp, J. H.....	2	Cushendall.....	Brockville C. I.
Pierce, Addie.....	1	Ellisville.....	Athens H. S.
Playfair, Wilfrid....	1	Lavant.....	Almonte H. S.
Pocock, C. E. A.....	5	Hillhurst.....	Coaticook Academy
Porter, W. C.....	7	Portsmouth.....	Kingston C. I.
Potter, R.....	2	Kingston.....	Kingston C. I.
Pound, F. J.....	4	Kingston.....	Kingston C. I.
Powell, W. R.....	4	Brockville.....	Brockville C. I.
Power, Gert. F. E..	3	Kingston.....	Kingston C. I.
Prendergast, A. R..	5	Montreal.....	Richmond, Que.
Pringle, J. F.....	1	Cornwall.....	Dufferin H. S.
Purdy, May.....	1	Cataraqui.....	Kingston C. I.
Quigley, J.....	3	Kingston.....	Regiopolis College.
Quincy, J. A.....	4	Wesley, Mich.....	Albert C., Belleville
Race, W. B.....	1	Watford.....	Mitchell H. S.
Ramsay, D. C.....	1	Plattsville.....	Woodstock C. I.
Ramsay, Walter.....	3	Edmonton, Alta.....	St. Mary's C. I.
Ramsay, William...	3	Plattsville.....	Woodstock C. I.
Raymond, A. L.....	3	Williamstown.....	Williamstown H. S.
Redden, Marion	3	Kingston.....	St. Margaret's.
Reid, E. J.....	2	Centreville.....	Napanee C. I.
Reid, Lulu.....	1	Kingston.....	Kingston C. I.
Reynolds, M.....	2	Packenham.....	Brockville C. I.
Rielly, F. J.....	3	Sydenham.....	Sydenham H. S.
Rielly, F. V.....	3	Sydenham.....	Sydenham H. S.
Robb, J. J.....	2	Kingston.....	Kingston C. I.
Robertson, J. J.....	1	Belleville.....	Albert C., Belleville
Robertson, G. D....	2	Dunnville.....	Owen Sound C. I.
Robertson, J. B.....	2	Toronto.....	Toronto C. I.
Robinson, John.....	4	Hamilton.....	Hamilton C. I.
Rogers, C. G. S.....	5	Niagara Falls.....	Niagara Falls C. I.
Ross, Sarah.....	1	Toronto.....	St Mary's and Strathroy.
Ruttan, Emily E....	7	Kingston.....	Kingston C. I.
Sargent, F. R.....	1	Kingston.....	Kingston C. I.
Saunders. Elsie E..	2	Kingston.....	Kingston C. I.
Scarrow, A. N.....	1	Stayner.....	Collingwood C. I.
Schrag, A. R.....	3	Brantford.....	Brantford C. I.
Schroder, S.....	2	Walsh, Assa.....	Kingston C. I.
Scott, A. K. (Rev.).	5	Pembroke.....	Woodstock C. I.
Scott, T. K.....	4	Kingston.....	

NAME.	Year of Attendance.	Summer Residence.	Where Educated.
Sears, J.	1	Kingston	Kingston C. I.
Sexsmith, M. E.	3	Melrose	Victoria Univ.
Sexton, J. H.	5	Kingston	Brockville C. I.
Sharp, G. M.	1	Kingston	Renfrew H. S.
Shaw, Lily	4	Kingston	Kingston C. I.
Sheppard, F. W.	3	Berlin	Berlin H. S.
Shibley, G. R.	4	Kingston	Kingston C. I.
Silver, Alice	3	Kingston	
Simpson, B. L.	2	Peterboro	Peterboro C. I.
Sinclair, Anna E.	5	Ottawa	Hamilton C. I.
Singleton, A. H.	4	Newboro	Athens H. S.
Slack, E. B.	4	Toronto	Williamstown H. S.
Smirle, Harriette.	3	Ottawa	Ottawa C. I.
Smith, A. F.	3		Renfrew H. S.
Smith, J. H.	5	Milverton	Mitchell H. S.
Smyth, W. L.	1	Pembroke	Pembroke and Orillia H. S.
Snowdon, H. A.	4	Copper Cliff	Elora H. S.
Sparks, Ella	2	Kingston	Kingston C. I.
Sparks, J. F.	4	Kingston	Kingston C. I.
Sparks, Wm.	3	Alliston	Chatham C. I.
Spence, J. C.	4	Ottawa	Collingwood C. I.
Stanley, J. N.	4	Port Colborne	Niagara Falls C. I.
Stewart, J. R.	1	Waba P. O.	Carleton Place H.S.
Stewart, Margaret J.	2	Renfrew	Renfrew H. S.
Stewart, Martha G.	2	La Guerre, Que.	Morrisburg C. I.
Stewart, R. S.	5	Mitchell	Stratford C. I.
Storey, Selina G.	4	Almonte	Almonte H. S.
Struthers, W. E.	1	Lanark	Goderich C. I.
Sullivan, James A.	1	Arnprior	Arnprior H. S.
Sullivan, J. F.	2	Ottawa	Peterboro C. I.
Sutherland, Edna.	2	Belleville	Belleville H. S.
Sutherland, J. C.	6	Richmond, Que.	Galt C. I.
Tanton, F.	1	Komoka	London C. I.
Taylor, Helen H.	4	Kingston	Kingston C. I.
Taylor, Mabel A.	4	Hamilton	Hamilton C. I.
Teskey, Kathleen.	1	Appleton	Carleton Place H.S.
Thibaudeau, P. H.	2	Uxbridge	Collingwood C. I.
Thompson, A. M.	3	Sarnia	Brockville C. I.
Thompson, A. Y.	2	Strathroy	Strathroy H. S.
Thompson, Edna G.	2	Kingston	Kingston C. I.
Thompson, Lottie.	2	Picton	Picton H. S.
Thornton, L. A.	3	Brooklyn	Kingston C. I.

NAME.	Year of Attendance.	Summer Residence.	Where Educated.
Tighe, F. J.....	2	Barrifield.....	Trinity Coll. School
Tod, J. G.....	1	(Deceased).....	Lucan H. S.
Tompkins, Louise H	2	Brockville.....	Brockville C. I.
Truscott, S. A.....	2	Sydenham.....	Sydenham H. S.
Twitchell, E. G. C.	2	Kingston	Kingston C. I.
Twohy, Henrietta B.	4	Hamilton.....	Hamilton C. I.
Vaux, Lillian.....	3	Hamilton.....	Brockville C. I.
Voaden, J.....	3	Talbotville.....	St. Thomas C. I.
Walkem, R. K.....	3	Kingston	Kingston C. I.
Walker, H.....	3	Metcalfe.....	Kemptville H. S.
Ward, H.....	3	Toronto.....	Berlin H. S.
Ward, Wm.....	2	Kingston	Berlin H. S.
Warren, L. A. H...	2	Balderson.....	Perth C. I.
Watson, Alice R....	5	Kingston	Kingston C. I.
Watson, G. A.....	1	Williamstown.....	Williamstown H.S.
Watts, J. R.....	4	Shelburne.....	Orangeville H. S.
Weese, Metta.....	2	Wolfe Island.....	Albert C., Belleville.
Wells, E. J.....	2	Boucks Hill.....	Morrisburg C. I.
Whinton, W. E. H.	1	Kingston	Kingston C. I.
White, H. P.....	1	Pembroke	St. Andrew's College, Toronto.
Whiting, C. C.....	4	Toledo.....	Smith's Falls H. S.
Williams, E. J. F...	5	Kingston	Kingston C. I.
Williams, Lorne J..	1	Watford.....	Watford H. S.
Williams, Walter...	2	Picton.....	Picton H. S.
Williamson, H. J...	4	Kingston	Kingston C. I.
Wilson, Annie J.....	2	Carp.....	Ottawa C. I.
Wilson, John.....	1	Belleville.....	Niagara Falls S.H.S
Wilson, J. L.....	4	Attwood	Harriston H. S.
Wilson, Jessie A....	3	Gananoque.....	Gananoque H. S.
Wilson, R. A.....	4	Renfrew.....	Renfrew H. S.
Wright, John H.....	1	Lillooet, B.C.....	Stanstead Wesleyan College.
Wright, E. A.....	5	Renfrew.....	Renfrew H. S.
Wright, Mabel.....	3	Renfrew.....	Renfrew H. S.
Wright, Thomas H.	1	Michel, B.C.....	Alb. Coll.
Wyatt, E.....	1	London	London C. I.
Young, J. M.....	3	Kingston	Renfrew H. S.

POST-GRADUATE STUDENTS (In Arts).

Name.	Address.
Anglin, Harriet, B.A.	Kingston.
Baker, M. B., B.A.	Stratford.
Barnard, A. T., B.A.	Hamilton.
Bellamy, Mabel G., B.A.	Prescott.
Burrows, A. G., M.A.	Napanee.
Clothier, J. O., B.A.	Vankleek Hill.
Cooper, Grant, B.A.	Merrickville.
Crummy, E., B.A., B.Sc.	Cataraqui.
Della Matter, Cornelia, B.A.	Brown's Nurseries.
Day, I., B.A.	Orillia.
Denyes, J. M., B.A.	Newburg.
Dickson, C. W., M.A.	Kingston.
Elliott, J., B.A., (Rev.)	Kingston.
Firth, W. P., B.A.	Pickering.
Fraser, T., B.A.	Orleans.
Gober, Mai, M.A.	Atlanta, Ga.
Hord, A. H., B.A.	Mitchell.
Jamieson, Georgina, M.A.	Napanee.
Laird, A. (Rev.) B.A.	Kingston.
Lees, R., M.A.	St. Thomas.
Longwell, A., B.A.	Foxboro.
Millar, J. F., B.A.	Millarton.
Mills, J. H., B.A.	Waterford.
Macalister, Ursilla, M.A.	Iroquois.
McDonald, J., M.A.	Williamstown.
MacDonald, J. F., M.A.	South Lancaster.
McIntosh, W. D., B.A.	Carleton Place.
Nesbit, D. A., B.A.	Newburgh.
Rogers, J. C., B.A.	Picton.
Seaton, E. T., B.A.	Cayuga.
Smith, J. C., B.A.	Kingston.
Wallace, J., M.A.	Renfrew.

GENERAL STUDENTS.

Name.	Residence.
Barry, Mary	Wolfe Island.
Carr-Harris, A	Kingston.
Carruther, J	Kingston.
Chrysler, G	Ottawa.
Connolly, N. W	Cataraqui.
Cook, A. O	Kingston.
Douglas, J. H	Levant.
Evans, A. R	Omemee.

Name.	Address.
Folger, B. W., Jr	Brooklyn, N.Y.
Folger, Mary S	Brooklyn, N.Y.
Fowler, Florence	Amherst Id.
Gardiner, Florence V	Kingston.
Gibson, G. H. D	Cataraqui.
Grant, Flora	Laggan.
Hanley, Nellie	Kingston.
Harty, Kathleen	Kingston.
Kidd, A. J	Prospect.
McCallum, Emily	Smyrna, Turkey.
McCarthy, D	
McEachren, G. D	Desbarats.
MacKinnon, A. D	Lake Ainslie, N.S.
MacKinnon, D. L	E. Lake Ainslie, C.B.
Nugent, Laura G	Kingston.
Pennock, N	Brockville.
Robinson, F. A	Kingston.
Smirle, Lizzie	Ottawa.
Smith, A. F	De Winton, Alta.
Spence, J. C	Kingston.
Stewart, D. J	Waba.
Taggart, R	Morton.
Tandy, Elsie	Kingston.
Thompson, B. W	Kingston.
Woods, I. H	Leesboro.
Workman, Bessie	Kingston.

STUDENTS IN THEOLOGY.

Name.	Year.	Residence.
Anthony, J., M.A	3	Kingston.
Brown, T	G.	Kingston.
Byrnes, J. D	3	Cumberland.
Cram, W. H., B.A., B.D	P.G.	Bath.
Edmison, Geo. A., B.A	2	Rothsay.
Edmison, J. H., B.A	3	Peterboro.
Fee, S. M., B.A	3	Camden East.
Ferguson, T. J. S., B.A	2	Blackstock.
Fotheringham, R. H	1	Rothsay.
Fraser, T., B.A	2	Orleans.
Goodwill, T. W	2	Charlottetown.
Gray, J. M	2	Kingston.
Guy, W. A., B.A	3	Camden East.
Henderson, M	3	Glenallan.
Hunter, R. F., M.A		Baltimore.

Name.	Year.	Address.
Leckie, N. M.	3	Hamilton.
Leggette, T.	G.	Kingston.
Millar, J. F., B.A.	2	Millarton.
Moore, W.	1	Carleton Place.
McConnell, J. A.	2	Elphin.
McDonald, W., B.A.	3	Blakeney.
MacIntyre, W. C.	2	Newington.
MacKinnon, M. A., M.A.	P.G.	Lake Ainslie, C. B.
McLaren, W. W., M.A.	3	Renfrew.
MacLean, L. H.		Port Hastings, C. B.
McLeod, K. C.	1	Braemar.
McMillan, A., B.A.	2	Sonya.
Philp, J. H.	G.	Cushendall.
Pocock, C. E.		Hillhurst, P.Q.
Pringle, G., B.A.	1	Galt.
Purvis, W., B.A.	2	Junetown.
Solandt, D. M., B.A.	1	
Taggart, R.	2	Morton.
Wallace, J., M.A.	3	Renfrew.

PRACTICAL SCIENCE STUDENTS.

Name.	Residence.
Anglin, C. S.	Kingston.
Anson-Cartwright, R. H. M.	Belleville.
Akyroyd, F. W.	Kepler.
Baker, H. S.	Kingston.
Baker, J. C.	Osnabruck Centre.
Baker, M. B., B.A.	Stratford.
Bartlett, J.	Port Hope.
Belfour, H. McC.	Bath.
Camsell, G.	Collingwood.
Chaplin, G. W.	St. Catharines.
Chapelle, J. W. S.	Baie Verte, N.B.
Clarke, C. M.	Kingston.
Corkhill, E. T.	Sydenham.
Craig, H. B. R.	Kingston.
Crothers, N. G.	Kings on.
Devitt, G. H.	Easton's Corners
Dickson, C. W., M.A.	Kingston.
Drummond, L. E.	Kingston.
Dwyer, E.	Kingston.
Fairlie, M. F.	Kingston.
Ferguson, M.	Kingston.
Finlayson, M. D.	Grand River, N.S.
Fraleck, E. L., B.A.	Belleville.
Gilbert, F.	Montreal.
Gleeson, J. V.	Kingston.

Name.	Address.
Gordanier, W. N	Napanee.
Grover, G. A	Kingston.
Harper, W	Baie Verte, N.B.
Henderson, E. W	Almonte
Hinckley, N. W	Kingston.
Horsey, G. F	Kingston.
Hunt, H. R	Bayside.
Jackson, H. G	Lindsay.
Jameson, W. B	Newlands, Eltham, Eng.
Keith, G. C	Smith's Falls.
Knight, C. W	Kingston.
Malone, E. E	Kingston.
Murray, J. C., B.A	Halifax, N.S.
McCallum, H. E., B.A	Kingston.
McDiarmid, S. S. R	Woodstock.
McKay, R. B	Cornwall.
Mackenzie, G C	Brantford.
Mackie, F. H	Oshawa.
Mackie, G. A	Kingston.
McNab, A. J	Douglas.
McNeill, W. K	Embro.
McRae, A. D., B.A	Kingston.
Noble, D. S	Clarkson.
Pense, E. H	Kingston.
Rawlins, J. W	Perth.
Redmond, A. V	Kingston.
Reid, F. D	Kingston.
Reid, G. C	Middleton, N.S.
Reid, J. A	Middleton, N.S.
Rose, S. L. E	Tamworth.
Scott, O. N	Listowell.
Silver, L. P	Kingston.
Smythe, W. L	Pembroke.
Squire, R. L	Kingston.
Stillwell, A. J	Southall, Eng.
Strachan, O	Kingston.
Sutherland, E	Belleville.
Tett, B	Newboro.
Thompson, A. T	Kingston.
Wagar, C. M	Enterprise.
Watt, J. W	Gananoque.
Webster, A. R	Lansdowne.
Wilgar, W. P	Cobourg.
Wilson, E. E. D	Harrietsville.
Workman, J. K	Kingston.
Workman, C. W	Kingston.
Wright, A. H	Brockville.
Young, G. A	Kingston.

STUDENTS IN MEDICINE, 1900-1901.

Name.	Year.	Address.
Amos, W. W.	2	Kingston.
Arthur, S. W.	3	Inverary.
Ash, A. F.	5	Kingston.
Austin, C. J.	1	Gouvenier, N.Y.
Aykroyd, W. H.	3	Kingston.
Aylesworth, F. A.	2	Bath.
Ballantyne, W. H.	1	Kingston.
Bell, F. M.	2	Kingston.
Bennett, A. E. H	1	Peterboro.
Bennett, H. J.	1	Gananoque.
Bleecker, G. H.	3	Trenton
Bogart, I. G.,	4	Berwick.
Bowie, H. A.	4	Kingston.
Brandon, J. V.	3	Ancaster.
Broley, T. B.	2	Charlottetown.
Brown, W. C.	1	Big Springs, Ont.
Carey, N. P.	3	Williamsville.
Carr-Harris F. F.	4	Kingston.
Carruthers, J. S.	1	New Glasgow.
Caskey, J. C.	1	Tweed.
Connell, J. V.	3	Spencerville.
Connolly, A. K.	1	Cataraqui.
Connolly, E. W.	5	Cataraqui.
Corrigan, J. A.	1	Kingston.
Costello, T. J.	1	Calgary, N.W.T.
Crews, J. W	3	Trenton.
Cryan, J. H.	2	Demorestville.
Curtin, T. V.	5	Brockville.
Dalton, G. F., B.A.	3	Kingston.
Dawson, J. K.	2	Wolfe Island.
Day, H. E.	3	Kingston.
Dear, C. B.	1	Bridgetown, Barbados.
DeLong, E. W.	1	Haleys.
Densmore, L. D	4	Maitland, N.S.
Dickey, J.	2	North Williamsburg.
Dick, O. J.	5	Kingston.
Driscoll, A. C	1	Trenton.
Elliott, E. S	5	Kingston.
Ellis, F. J.	2	Ellisville.
Eshoo, S. O	3	Oroomiah, Persia.
E. Etherington	3	Portsmouth.
Fahey, E. W.	4	Kingston.
Fairie, J. A.	2	Montreal.
Falkner, A. D.	1	Williamstown.
Ferguson, A. A.	1	Glen Walter.
Ferguson, E. A.	2	Kingston.

Name.	Year.	Address.
Fifield, R. J	2	Newboro.
Foley, T. B	2	Charlottetown, P.E.I.
Gage, H. E	3	Kingston.
Gallivan, J. V	1	Kingston.
Genge, T. S	4	Holleford.
Gibson, H. A	2	Kingston.
Gibson, W	1	Emerald.
Gillespie, J. J	1	Morrisburg.
Goodfellow, J. R	1	Godfrey.
Gray, D. W	3	Kingston.
Graves, T. J	1	Kingston.
Grimshaw, W. S	4	Kingston.
Halladay, R. W	1	Elgin.
Hamin, A. C	1	Bath.
Hamin, B. N	1	Bath.
Hanley, G J	4	Kingston.
Haskin, B	2	Greenbush.
Haycock, G. W. G	3	Cataraqui.
Hill, J. T	3	Conway.
Houston, D. H	2	Belleville.
Hunter, W. R	3	Smith's Falls.
Hurdman, A. G	5	Ottawa.
Jones, L. W	3	Kingston.
Kane, J. J	2	Gananoque.
Kearns, D. H	2	Ottawa.
Kennedy, D. B	3	Pembroke.
Kennedy, F	1	Wolfe Island.
Knox, W. J	2	Beachburg.
Labrosse, J. L A	1	St. Eugene.
Laidlaw, J. H	2	Georgetown.
Lalonde, A. J	1	Kingston.
Lazier, D. B	4	Belleville.
Leonard, A. H	2	Kingston.
Manion, R. J	1	Fort William.
Mason, W. R	3	Ottawa.
Mellon, P. B	4	Ottawa.
Mellow, F. E	3	Sillsville.
Merrill, J. W., B.A	3	Ottawa.
Moore, H. M	2	Athens.
Moore, R. G	3	Belleville.
Murphy, W. S	1	Portland.
Mylks, L	2	Glenmore.
McCarthy, H	2	Kingston.
McCarthy, D. N	2	Kingston.
McCulloch, J	4	Fort Perry.
McCullough, F. C	1	Gananoque.
McDonald, Ae	4	Ottawa.

Name.	Year.	Address.
McDonald, H. A.	1	Sunbury.
McDonell, J. J.	2	St. Andrew's West.
McDowall, J. L.	1	Kingston.
McGonigle, M.	1	Newboro.
McGreer, C. G	1	Napanee.
McIntosh, G. E.	2	Kingston.
Macintyre, A. D.	4	Glencoe.
McKechnie, W.	3	Elmside, Que.
McKenzie, R. P.	1	Plainfield.
MacKerras, R. H.	1	Kingston.
McCambridge, J. J. E.	2	Kingston.
McKinley. W. W.	2	Seeley's Bay.
McLaren, T. O.	3	Lancaster.
McLaren, T. C.	3	Osceola.
MacMillan, A. E.	2	Sydenham.
Nash, P. I.	3	Kingston.
O'Reilly, T. J.	3	Newfoundland.
Orser, T H.	3	Glenvale.
Pannell, W. L	2	Kingston
Patterson, W. J.	3	Peterboro.
Paul, H. E.	4	Newburgh.
Porteous, C. A.	4	Kingston.
Presseau, J. W.	1	Montreal.
Pritchard, J. A.	2	Brockville.
Redmond, W. C.	4	Picton.
Reid, V.	1	Kingston.
Reid, G. M.	2	Kingston.
Reid, G. R.	1	Kingston.
Reid, R. M	3	Renfrew.
Richardson, E.	4	Brockville.
Robinson, E. J.	1	North Williamsburg.
Roy, E.	4	Cudahy, Wis.
Ruthledge, S. H.	1	Thomasburg.
Scott, R. H.	2	Pembroke.
Sheffield, E.	2	Peterboro.
Shirreff, W. T.	2	Fitzroy Harbor.
Singleton, A. H.	1	Newboro.
Smith, A. L.	3	Kingston.
Smith, D. T.	4	Ottawa.
Sproule, E. W.	1	Harrowsmith.
Staley, A.	2	Wolfe Island.
Stratton, C. M.	3	Kingston.
Stewart, J. G.	1	Renfrew.
St. Remy, C. de.	3	Kingston.
Tandy, H., B.A.	1	Kingston.
Thompson, E. J.	4	Kingston.
Tyner, S. E.	1	Kingston.

Name.	Year.	Address.
Tyner, W. G..	4	Kingston.
Van Ness, C. S.	1	Wolfe Island.
Ward, G. H.	2	Napanee.
Weatherhead, G. J., B.A.	3	Brockville.
Wiedmark, G. A.	1	Burrit's Rapids.
Wellwood, J. A , B.A..	2	Fordyce.
Windel, H. C., M.A.	3	Lotus.
Workman, W.	2	Kingston.
Woodruff, G. A.	4	Sydenham.
Young, M. R.	4	Millsville, N.S.
Zwicker, F. G.	3	Halifax, N. S.

ARTS HONOUR LISTS FROM 1877 TO 1900.

Alcombreck, R. W., Greek II, '96; Latin II, '97.
Allen, Maggie D., Botany I, '93; Geology I, '93; Zoology II, '93; Histology II, '93.
Allen, T. G., Natural Science I, '88.
Anderson, F. C., Animal Biology II, '00; Botany I, '00.
Anglin, F. R., German II, '94; French II, '95; Italian II, '94.
Anglin, R. W., Mathematics I, '97.
Anthony, J., Political Science III, '98; Philosophy I, '00.
Arthur, C. C., Chemistry I, '91; Botany I, '91; Zoology I, '91.
Asselstine, F., Botany I, '97.
Attwood, A. E., Animal Biology II, '95; Botany I, '95.
Bajus, Carrie, French II, '00; German III, '00.
Baker, H. M, Botany I, '91; Zoology I, '91; Geology I, '91.
Baker, M. B., Chemistry II, '00; Geology I, '00.
Baker, W. C., Chemistry I, '95; Mineralogy I, '95; Physics II, '97.
Baker, W. R., Botany II, '96.
Barclay, W. B. C., Latin II, '88; English Literature and History II, '88.
Barker, J., English III, '99.
Barnard, A. T., Latin I, '99; English III, '99.
Barr, Janet, Italian II, '94; French III, '00; German III, '00; English III, '00.
Beall, A. W., Latin I, '88; Moderns I, '88.
Beaton, A. H., History I, '94; Political Science II, '94.
Beaton, K., English III, '97; Latin II, '96.
Belfour, P. F., Chemistry II, '99; Mineralogy II, '99.
Bell, J. M., Biology I, '99; Chemistry I, '99.
Bellamy, Mabel, English III, '00.
Bennett, C. V., Latin II, '94; Greek II, '94.
Bennett, W. C., Greek III, '97; Latin II, '95.
Bennett, W. H., Latin III, '00.
Berlanquet, H. S., Latin II, '96; Greek II, '96.
Bernstein, J. S., History I, '97; Political Science I, '98.
Best, Isabella M., English II, '00.
Binnie, J., Political Economy I, '88; Philosophy II, '88.
Black, H. H., Latin I, '98; Greek I, '99.
Boddy, Martha, Systematic Mineralogy (only), '93; Zoology II, '93; Histology I, '93; Geology I, '94.
Bower, T. T., Animal Biology II, '98.
Bowermann, J. T., Botany I, '89; Zoology I, '89; Geology I, '89.
Boyd, Annie A., Botany I, '98; Biology I, '98.
Boyd, Mabel E., Botany II, '98; Biology III, '98.
Boyle, J., Mathematics II, '91.
Breck, R. W., Mineralogy I, '95; Chemistry I, '95.
Briden, William M., Classics I, '79.
Brisco, N. A., History I, '98; Political Science I, '00.

Brown, A. B., English III, '97 ; French II, '98 ; German III, '98 ; Italian II, '98.
Brown, J. C., English I, '96 ; History I, '96.
Bryan, H. W., Latin I, '94 ; Greek I, '94.
Burgess, H. H., History I, '96.
Burrows, A G., Chemistry I, '00 ; Mineralogy I, '00.
Burton, R., English I, '96 ; Philosophy I, '98.
Cameron, C. J., Greek I, '82; Latin I, '82.
Cameron, C. K. O., Histology I, '93.
Cameron, J., English I, '97 ; German II, '97 ; French II, '96 ; Italian I, '97.
Campbell, Annie G., Moderns I, '91.
Campbell, A. L., English III, '97.
Campbell, C. D., Latin II, '95 ; Greek II, '96.
Campbell, P. McG , Mathematics II, '92.
Cannon, J. D., Political Science I, '98.
Carmichael, H., Philosophy I, '97.
Carmichael, N. R., Mathematics I, '90 ; Greek I, '90 ; Latin I, '90.
Chisholm, W. I., Botany I, '94 ; Animal Biology I, '94.
Chisholm, W. J., Zoology I, '93.
Clark, G. W., Latin I, '99 ; Greek I, '99 ; English III, '99.
Clark, J. K., Chemistry II, '95.
Clark, J. W., Geology II, '95.
Clark, R. J , Latin II, '95 ; Greek I, '95 ; English I, '95 ; Political Science II, '95.
Clark, W. T., Latin II, '95 ; Greek II, '95.
Claxton, J., Latin II, '88.
Claxton, J. A., Moderns I, '88.
Cloney, S. Louise, Italian I, '96 ; German II, '97 ; French I, '97.
Cloney, S. E., English I, '96.
Clyde, W., Greek I, '86.
Collinson, J., Chemistry I, '98.
Collier, W. H., Mathematics II, '98.
Conn, J. R., English II, '96 ; Political Science I, '96.
Connell, J. C., Mathematics I, '85.
Connell, J., Latin II, '92; Greek II, '92.
Connolly, H. A., Moderns I, '95 ; English I, '95.
Cooke, J., Latin II, '84 ; Greek II, '84.
Corkill, E. J., Chemistry II, '89 ; Botany II, '89.
Cowley, R. H., Geology I, '92.
Crawford, W. F., Philosophy II, '00.
Cryan, G., French III, '97 ; Italian II, '97 ; German II, '98 ; English II, '98.
Croskery, R. A., Latin II, '95.
Cummings, J. G , Physics I, '98.
Cunningham, D , Zoology I, '91.
Curle, W., Mathematics I, '89 ; Political Economy I, '89.
Currie, P. W., Latin II, '96.
Dalton, G. F., History I, '97 ; Political Science III, '98.

Davis, B. N., Mathematics I, '81 ; Chemistry I, '81.
Davis, W. H., Philosophy I, '93.
Day, A. E., Moderns I, '95; English I, '96
Denyes, J. M., Latin II, '95 ; Moderns II, '95.
Deltor, W. T., History II, '97.
Dickson, C. W., Animal Biology I, '00 ; Chemistry I, '00.
Dolan, G., Latin II, '99 ; English III, '99; Greek II, '00; History I, '00.
Dolan, J. H., Greek I, '97; Latin II, '98.
Downing, J., Latin II, '92; Modern II, '92.
Downing, J. J., Latin II, '91.
Dowsley, W. C., English II, '98 ; Latin I, '98.
Drennan, Ethel, English III, '00.
Drummond, D R , Greek I, '89 : Latin I, '89.
Drummond, W. J., Greek II, '85 ; Latin II, '85.
Duff, J., Greek I, '99 ; English I, '99.
Dunkley, A. W., Latin I, '98 ; Greek I, '99
Dunlop, J. G., Modern I, '86 ; English Literature and History II, '87.
Dupuis, J. M., Chemistry I, '79.
Durie, C. L., English II, '99 ; Political Science I, '99.
Dyde, G. E., English II, '93 ; Greek I, '89 ; Latin II, '89.
Dyde, S. W., Classics I, '81 ; Philosophy I, '84
Easton, W. H., Philosophy I, '93.
Edmison, G. A., Political Science II, '00.
Edwards, C. B., English II, '99
Elliott, E., English II, '86 ; History I, '86 ; Moderns II, '86.
Ewing, W. C., Animal Biology I, '95; Botany I, '95.
Farquharson, R. A., Moderns III, '97.
Farrel, T. H., Mathematics I, '89.
Fee, W. M., Philosophy I, '99.
Fenwick, A. M., Botany I, '90 ; Zoology I, '90 ; Geology I, '90.
Ferguson, R., English Literature and History I, '82.
Findlay, J , Mathematics I, '87 ; Philosophy I, '90.
Finley, W. A., Greek I, '88 ; Latin I, '88.
Firth, W. P., Chemistry III, '99.
Fitzgerald, Eliza S., Greek I, '84 ; Latin I, '84.
Fitzpatrick, A., English II, '95.
Ford, A. B., Chemistry II, '93 : Zoology I, '93 ; Histology I, '93
Fowler, H. C., English Literature and History, '81.
Fox, C. B., Chemistry I, '94 ; Histology I, '94 ; Zoology II, '93.
Folger, Marion, Moderns I, '86.
Fraser, Annie E., English I, '95.
Fraser, J. R., Philosophy I, '93.
Fraser, T., English I, '97 ; Latin III, '98.
Furlong, T. H., Botany I, '97 ; Animal Biology I, '97.
Gallup, E. C., English II, '92.
Gandier, A., English Literature and History I, '83 ; Philosophy I, '83.
Gardiner, S. H., Chemistry I, '86 ; Natural Science I, '86.
Gavin, F. P., Botany I, '96 ; Animal Biology II, '96.
Geddes, R. W., Latin II, '96 ; Greek II, '96.

Gibson, J. C., Mathematics I, '92.
Gilfillan, J., Botany II, '96.
Givan, A., Mathematics I, '83.
Givens, D. A., Mathematics I, '78.
Gober, Mai, English I, '98 ; History I, '99.
Goodfellow, J., English III, '97.
Gould, W. H., Mathematics I, '00.
Graham, P. E., French I, '98 ; German I, '98 ; Italian II, '98 ; English III, '98.
Grange, W. A., Political Science II, '98.
Grant, W. L., Latin I, '94; Greek I, '94.
Gray, S. H., Latin II, '94 ; Greek II, '94.
Grenfell, Caroline, Italian II, '97 ; German III, '99 ; French III. '99 ; English III, '99.
Grenfell, M. Elizabeth, Italian I. '98 ; French II, '99 ; German II, '99 ; English III, '99.
Griffin, E. S., Latin II, '89 ; Moderns II, '89.
Griffith, Agnes J., English I '95 ; Moderns I, '96.
Griffith, Edna B., Mathematics II, '96.
Guess, G. A., Zoology I, '93 ; Histology I, '93.
Guess, H. A., Chemistry I, '95 ; Mineralogy I, '95.
Haig, A., Chemistry II, '88
Hales, J. Chemistry I, '88 ; Philosophy II, '89.
Hall, J. R., Political Science II, '96 ; Philosophy I, '98.
Hamilton, C. F., English Literature I, '90 ; History I, '90.
Harper, A. M., History I, '00 ; Political Science II, '00.
Hartwell, G. E., Greek II, '88.
Harvey, K., Italian II, '94 ; French II, '95.
Hawley, A. T., Latin I, '99 ; Greek I, '99.
Hay, A G. Political Economy I, '88 ; Philosophy II, '89.
Hay, J. Philosophy I, '82 ; Political Economy I, '84.
Haydon, A., English I, '93 ; History I, '93 ; Political Science I, '93.
Heap, F., Greek I, '90 ; Latin I, '90.
Henderson, G. F., English Literature I, '84.
Henderson, M., Political Science III, '00.
Henstridge, Eliz., English I, '96 ; History I, '97 ; French II, '00 ; German III, '00.
Herbison, R., Greek II, '94 ; Philosophy I, '96.
Herbison, W. J., English II, '95 ; Political Science II, '95.
Hermiston, G. M., History II, '95.
Hiscock, R. C., Petrography and Economic Geology II, '96 ; Chemistry I, '96 ; Mineralogy II, '96.
Hord, A H., English II, '00.
Horsey, H. E., Mathematics I, '86.
Hugo, F., English I, '93 ; Political Science I, '93 ; History I, '94.
Hume, J. P., Mathematics I, '81 ; Chemistry I, '81.
Hunter, J. McF., English Literature and History I, '86.
Hunter, R. F , History I, '96 ; English I, '97.
Hunter, W. R., Animal Biology I, '00.

Hutcheson, R. J., Latin I, '92; Greek I, '92.
Instant, F. P., English II, '96.
Ireland, F. A. W., Greek I, '91; Latin I, '91; English Literature I, '91.
Irvine, R., Latin II, '81.
Irvine, William H., Mathematics I, '77; Physics I, '77.
Irving, W. G., Political Science II, '94.
Jameson, Georgina, French I, '99; German I, '99; English I, '99.
Johns, C. P., French I, '96; German II, '96; Italian II, '96; English II, '96.
Johnston, J. K., Animal Biology I, '97; Botany I, '97.
Johnston, J. R., English Literature and History II, '82.
Johnston, J. W., Botany 1, '94; Animal Biology II, '94.
Kayler, W. B., Histology II, '93
Keillor, James, English III, '00; History I, '00.
Kellock, J. McC., English Literature I, '92; History I, '92
Kellock, W. McC., English II, '96; Political Science II, '96.
Kemp, W., French I, '98; German I, '98; Italian I, '98; English I, '99.
Kennedy, T., Mathematics I, '99.
Kerfoot, H. W., Latin II, '00.
Kilborn, O. L., Chemistry I, '87.
King, F., Mathematics I, '89.
King, W. W., Latin I, '95; Greek I, '95.
Kirkland, W. S., Botany I, '98; Biology I, '98.
Laird, Annie L., English II, '00.
Laird, D. H., Latin I, '98.
Laird, R., Latin I, '92; Greek I, '92; Philosophy I, '95.
Lang, G. R., Philosophy II, '96.
Langford, T. E., Botany I, '98; Biology II, '98.
Lavell, C. F., History I, '93; Political Science I, '94.
Lees, R., Botany I, '90; Zoology I, '90; Geology I, '90.
Left, R. M., English Literature II, '89; History I, '89; Moderns II, '89.
Lewis, L. L., French II, '99; German II, '99; Italian I, '99; English II, '00.
Liebner, E., Animal Biology III, '00, Botany I, '00.
Lindsay, C. V., History I, '99; Political Science I, '00.
Lindsay, E., History II, '96.
Linton, A. R, Classics I, '80; Philosophy I, '81.
Lockhart, T. J., Zoology I, '91.
Lochead, W. M., History I, '97; Political Science I, '98.
Logie, W. A., Greek I, '87; Latin I, '87.
Malcolm, G., History II, '92.
Malone, Edith, French I, '99; German I, '99; Italian I, '99; English I, '00.
Marquis, T. G., English Literature I, '91.
Marshall, J., Philosophy I, '87; English Literature I, '91.
Marshall, J. W., Latin III, '98.
Marshall, W. F., Political Science I, '98; English I, '98.

Marty, Aletta E., Moderns I, '93; English II, '94.
Marty, Sarah E , Moderns I, '96; English I, 97.
Matthews, S. W., Mathematics I, '97.
Meade, R , Botany I, '96; Animal Biology I, '96.
Meiklejohn, A. J , English II, '98.
Menish, Janet I., Moderns II, '95 ; English II, '95.
Menzies, R. D., Chemistry II, '95 ; Animal Biology I, '96.
Millar, J., Philosophy I, '91.
Millar, J. M., English I, '93.
Millar, J. L., English II, '95 ; Political Science II, '96.
Miller, J., English Literature and History II, '86 ; Moderns II, '86.
Miller, J. D., English II, '96 ; Political Science II, '96.
Millions, Edna, French III, '99 ; German III, '99.
Mills, J. H., Greek I, '89 ; Latin I, '89.
Mills, Rhoda, Latin III, '98.
Minnes, R., Mathematics I, '89.
Misener, Geneva, Latin I, '98 ; Greek I, '99.
Mitchell, G. A. Philosophy II, '99.
Mitchell, G. W., Greek II, '85 ; Latin II, '85.
Mitchell, S. A., Mathematics I, '94 ; Physics I, '95.
Moffat, W., Qualitative Analysis (only) I, '93 ; Zoology I, '93 ; Histology, 1, '93 ; Botany I, '94 ; Animal Biology I, '94.
Moore, J. R., Botany I, '96 ; Animal Biology I, '96.
Morden, G. W., Chemistry II, '88.
Morgan, J., Animal Biology III, '00 ; Botany II, '00.
Morrison, A. S., History I, '97 ; English III, '98
Morton, Alice, Mathematics I, '99.
Mowat, A, English III, '00.
Mowat, J. McD., English II, '94 ; Political Science I, '95.
Mudie, Ethel, English III, '99 ; History I, '99.
Munro, H. B., English III, '98 ; History I, '98.
Munro, Maud E., French II, '96 ; Italian I, '96 ; German II, '99 ; English III, '99.
Munro, W. B , History I, '95 ; Political Science I, '96.
Murray, D. C., Animal Biology I, '00 ; Botany I, '00.
Murray, Minnie, Philosophy I, '94.
Macalister, Ursilla, Latin I, '00 ; English I, '00.
McCaig, J., English II, '96.
McCallum, A. B., Philosophy I, '80.
McCallum, J. A., English II, '00.
McClement, W. T., Chemistry I, '87 ; Natural Science I, '88.
McColl, A. E., Mathematics II, '85.
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Arts

PASS PAPERS.

Junior Latin.

Translate:

Galli occursant in ripam cum variis ululatibus cantuque moris sui, quatientes scuta super capita vibrantesque dextris tela, quamquam ex adverso terrebat tanta vis navium cum ingenti sono fluminis et clamore vario nautarum, militum, et qui nitebantur perrumpere impetum fluminis, et qui ex altera ripa trajicientes suos hortabantur. Jam satis paventes adverso tumultu terribilior ab tergo adortus clamor, castris ab Hannone captis. Mox et ipse aderat, ancepsque terror circumstabat, et e navibus tanta vi armatorum in terram evadente, et ab tergo improvisa premente acie. Galli postquam utroque vim facere conati pellebantur, qua patere visum maxime iter, perrumpunt, trepidique in vicos passim suos diffugiunt. Hannibal ceteris copiis per otium trajectis, spernens jam Gallicos tumultus castra locat.

Livy B. xxi. c. 28.

1. Parse *nitebantur, adortus, captis, evadente, trajectis.*

2. State the syntax of *terrebat, tumultu, visum.*

3. State briefly the course of events up to the crossing of the Alps.

Translate:

O nata mecum consule Manlio,
Seu tu querelas sive geris jocos
Seu rixam et insanos amores
Seu facilem, pia testa, somnum,
Quocunque lectum nomine Massicum
Servas, moveri digna bono die,
Descende, Corvino jubente
Promere languidiora vina.
Non ille, quamquam Socraticis madet
Sermonibus, te negleget horridus:
Narratur et prisci Catonis
Saepe mero caluisse virtus.
Tu lene tormentum ingenio admoves
Plerumque duro; tu sapientum
Curas et arcanum jocoso
Consilium retegis Lyaeo;
Tu spem reducis mentibus anxiis
Viresque, et addis cornua pauperi;
Post te neque iratos trementi
Regum apices neque militum arma.

Horace B. iii. 21.

1. Parse *nata, jubente, negleget, caluisse, Socraticis, sermonibus.*

2. Write notes on, *Consule Manlio, prisci Catonis, apices.*

Translate :

vix ea fatus erat senior, subitoque fragore
intonuit laevum, et de caelo lapsa per umbras
stella facem ducens multa cum luce cucurrit.
illam, summa super labentem culmina tecti,
cernimus Idaea claram se condere silva,
signantemque vias ; tum longo limite sulcus
dat lucem, et late circum loca sulfure fumant.
hic vero victus genitor se tollit ad auras,
adfaturque deos, et sanctum sidus adorat.
"iam iam nulla mora est ; sequor, et qua ducitis, adsum,
di patrii ; servate domum, servate nepotem ;
vestrum hoc augurium, vestroque in numine Troia est.
cedo equidem, nec, nate, tibi comes ire recuso."

VERGIL B. ii.

1. Scan the first three lines.

2. Comment on the syntax of *laevum.* Of what nature was a sign on the left ?

Translate into Latin :

From Cadiz in the west Hannibal returned to his winter quarters in New Carthage. From that place he set out for Hither Spain. Tradition reports that on that journey in the course of a dream he saw a young man of divine form who told him that he was sent to guide him into Italy. He urged him to follow on, and keep his eyes fixed on him. At first he followed without looking either back or around. Then with the innate curiosity of human nature he looked back aud saw a serpent of immense size rushing along with a terrible uproar. On asking what this noise meant he was told that it predicted the devastation of Italy.

Sight Translation :

Accusatus est ergo Miltiades proditionis, quod, cum Parum expugnare posset, a rege corruptus infectis rebus discessisset. eo tempore aeger erat vulneribus, quae in oppugnando oppido acceperat. itaque cum ipse pro se dicere non posset, verba fecit frater eius Stesagoras. causa cognita capitis absolutus pecunia multatus est, eaque lis quinquaginta talentis aestimata est, quantus in classem sumptus factus erat. hanc pecuniam quod solvere in praesentia non poterat, in vincla publica coniectus est ibique diem obiit supremum.

CORNELIUS NEPOS.

Senior Latin.

Translate into English, explaining the historical allusions:

1. Ibat et Hippolyti proles pulcherrima bello,
Virbius: insignem quem mater Aricia misit,
Eductum Egeriae lucis humentia circum
Litora, pinguis ubi et placabilis ara Dianae.
Namque ferunt fama Hippolytum, postquam arte novercae
Occiderit, patriasque explerit sanguine poenas,
Turbatis distractus equis, ad sidera rursus
Ætherea, et superas coeli venisse sub auras,
Paeoniis revocatum herbis, et amore Dianae.
Tum pater omnipotens, aliquem indignatus ab umbris
Mortalem infernis ad lumina surgere vitae,
Ipse repertorem medicinae talis et artis
Fulmine Phoebigenam Stygias detrusit ad undas.
At Trivia Hippolytum secretis alma recondit
Sedibus, et Nymphae Egeriae nemorique relegat:
Solus ubi in silvis Italis ignobilis aevum
Exigeret, versoque ubi nomine Virbius esset.
Unde etiam Triviae templo lucisque sacratis
Cornipedes arcentur equi, quod litore currum
Et iuvenem monstris pavidi effudere marinis.
Filius ardentes haud secius aequore campi
Exercebat equos, curruque in bella ruebat.

VIRGIL *Aeneid* vii 761 782.

2. Dupliciter delectatus sum tuis litteris, et quod ipse risi et quod te intellexi jam posse ridere. Me autem a te, ut scurram velitem, malis oneratum esse non moleste tuli. Illud doleo, in ista loca venire me, ut constitueram, non potuisse. habuisses enim non hospitem, sed contubernalem. At quem virum! non eum, quem tu es solitus promulsidec onficere. Integram famem ad ovum adfero: itaque usque ad assum vitulinum opera perducitur. Illa mea, quae solebas antea laudare, "O hominem facilem! o hospitem non gravem!" abierunt. Nos omnem nostram de re publica curam, cogitationem de dicenda in senatu sententia, commentationem causarum abiecimus: in Epicuri nos adversarii nostri castra coniecimus, nec tamen ad hanc insolentiam, sed ad illam tuam lautitiam, veterem dico, cum in sumptum habebas: etsi numquam plura praedia habuisti. Proinde te para: cum homine et edaci tibi res est qui jam aliquid intellegat: ὀψιμαθεῖς autem homines scis quam insolentes sint.

CICERO *Letter* 53.

3. Sed Galba, post nuntios Germanicae seditionis, quamquam nihil adhuc de Vitellio certum, anxius quonam exercituum vis erumperet, ne urbano quidem militi confisus, quod remedium

unicum rebatur, comitia imperii transigit: adhibitoque, super Vinium ac Laconem, Mario Celso, consule designato, ac Ducenio Gemino, praefecto urbis, pauca praefatus de sua senectute, Pisonem Licinianum arcessi iubet; seu propria electione, sive, ut quidam crediderunt, Lacone instante, cui apud Rubellium Plautum exercita cum Pisone amicitia: sed callide, ut ignotum, fovebat; et prospera de Pisone fama consilio eius fidem addiderat. Piso, M. Crasso et Scribonia genitus, nobilis utrimque, vultu habituque moris antiqui, et aestimatione recta severus, deterius interpretantibus tristior habebatur. Ea pars morum eius, quo suspectior sollicitis, adoptanti placebat.

TACITUS *Hist.* i 14.

4. Si te dolor aliqui corporis aut infirmitas valetudinis tuae tenuit quo minus ad ludos venires, fortunae magis tribuo quam sapientiae tuae: sin haec, quae ceteri mirantur, contemnenda duxisti et, cum per valetudinem posses, venire tamen noluisti, utrumque laetor, et sine dolore corporis te fuisse et animo valuisse, cum ea, quae sine causa mirantur alii, neglexeris; modo ut tibi constiterit fructus otii tui, quo quidem tibi perfrui mirifice licuit, cum esses in ista amoenitate paene solus relictus. Neque tamen dubito quin tu per eos dies matutina tempora lectiunculis consumpseris, cum illi interea, qui te istic reliquerunt, spectarent comminus mimos semisomni. Reliquas vero partes diei tu consumebas iis delectationibus, quas tibi ipse ad arbitrium tuum compararas, nobis autem erant ea perpetienda, quae Sp. Maecius probavisset.

CICERO *Letter* 17.

5. Translate into Latin:

William felt that it would be madness in him to imitate the example of Monmouth, to cross the sea with a few British adventurers and to trust to a general rising of the population. It was necessary, and it was pronounced necessary by all those who invited him over, that he should carry an army with him. Yet who could answer for the effect which such an army might produce? The government was indeed justly odious. But would the English people, altogether unaccustomed to the interferenee of continental powers in English disputes, be inclined to look with favour on a deliverer who was surrounded by foreign soldiers?

6. State what you consider to be the chief characteristics of Virgil's poetry.

7. Give a short account of Q. Cicero.

8. Scan the following lines, explaining anything worthy of remark about them:

Ingredere o Teucrum atque Italum fortissime ductor
Jamque iter emensi turres ac tecta Latinorum
Ardea Crustumerique et turrigerae Antemnae
Lausus equum domitor debellatorque ferarum.

Junior Greek.

Translate:

ἐκ δ' εὐνὰς ἔβαλον, κατὰ δὲ πρυμνήσι' ἔδησαν·
ἐκ δὲ καὶ αὐτοὶ βαῖνον ἐπὶ ῥηγμῖνι θαλάσσης,
δεῖπνόν τ' ἐντύνοντο κερῶντό τε αἴθοπα οἶνον.
αὐτὰρ ἐπεὶ πόσιος καὶ ἐδητύος ἐξ ἔρον ἔντο,
τοῖσι δὲ Τηλέμαχος πεπνυμένος ἤρχετο μύθων·
"ὑμεῖς μὲν νῦν ἄστυδ' ἐλαύνετε νῆα μέλαιναν,
αὐτὰρ ἐγὼν ἀγροὺς ἐπείσομαι ἠδὲ βοτῆρας·
ἐσπέριος δ' εἰς ἄστυ ἰδὼν ἐμὰ ἔργα κάτειμι.
ἠῶθεν δέ κεν ὔμμιν ὁδοιπόριον παραθείμην,
δαῖτ' ἀγαθὴν κρειῶν τε καὶ οἴνου ἡδυπότοιο."

HOMER, *Odyssey* xv 498-597.

1. Parse κερῶντο, ἔντο, ἐπείσομαι, παραθείμην.

2. Point out some Epic forms and give the Attic equivalents.

3. Scan the first three lines.

Translate:

Ἐπέδειξαν δὲ καὶ ἐν ταῖς δυστυχίαις τὴν ἑαυτῶν ἀρετήν. Ἀπολομένων γὰρ τῶν νεῶν ἐν Ἑλλησπόντῳ εἴτε ἡγεμόνων κακίᾳ εἴτε θεῶν δυσνοίᾳ, καὶ ξυμφορᾶς ἐκείνης μεγίστης γενομένης καὶ ἡμῖν τοῖς δυστυχήσασι καὶ τοῖς ἄλλοις Ἕλλησιν, ἐδήλωσαν οὐ πολλῷ χρόνῳ ὕστερον ὅτι ἡ τῆς πόλεως δύναμις τῆς Ἑλλάδος ἦν σωτηρία. Ἑτέρων γαρ ἡγεμόνων γενομένων ἐνίκησαν μὲν ναυμαχοῦντες τοὺς Ἕλληνας οἱ πρότερον εἰς τὴν θάλατταν οὐκ ἐμβαίνοντες, ἔπλευσαν δ' εἰς τὴν Εὐρώπην, δουλεύουσι δὲ πόλεις τῶν Ἑλλήνων, τύραννοι δ' ἐγκαθεστᾶσιν, οἱ μὲν μετὰ τὴν ἡμετέραν ξυμφοράν, οἱ δὲ μετὰ τὴν νίκην τῶν βαρβάρων.

LYSIAS, *Epitaphios* 58, 59.

1. Explain the construction of ἀπολομένων, χρόνῳ, ἡγεμόνων.

2. *ξυμφορᾶς ἐκείνης κ. τ. λ.* To what historical event does Lysias allude?

Translate:

Καὶ μὲν δὴ πολλοὶ καὶ τῶν ἀστῶν καὶ τῶν ξένων ἥκουσιν εἰσόμενοι τίνα γνώμην περὶ τούτων ἕξετε. ὧν οἱ μὲν ὑμέτεροι ὄντες πολῖται μαθόντες ἀπίασιν ὅτι ἢ δίκην δώσουσιν ὧν ἂν ἐξαμάρτωσιν, ἢ πράξαντες μὲν ὧν ἐφίενται τύραννοι τῆς πόλεως ἔσονται, δυστυχήσαντες δὲ τὸ ἴσον ὑμῖν ἕξουσιν· ὅσοι δὲ ξένοι ἐπιδημοῦσιν, εἴσοιται πότερον ἀδίκως τοὺς τριάκοντα ἐκκηρύττουσιν ἐκ τῶν πόλεων ἢ δικαίως. εἰ γὰρ δὴ αὐτοὶ οἱ κακῶς πεπονθότες λαβόντες ἀφήσουσιν, ἢ που σφᾶς αὐτοὺς ἡγήσονται περιέργους ὑπὲρ ὑμῶν τιμωρουμένους.

IBID., *Contra Eratosthenem.*

1. Parse *εἰσόμενοι, ἀπίασιν, ἐφίενται, ἀφήσουσιν,*
2. *ὧν ἐφίενται.* Account for the genitive.
3. Give a brief account of the case against Eratosthenes.

Translate into Greek:

Now fifty years after the Persian invasion there broke forth war between Sparta and Athens. Athens was fortified with walls and a citadel. Sparta had neither walls nor a citadel, but its citizens trained their bodies so that they might be good soldiers. One of their kings said in his pride, "Our army is the wall of Sparta, for every man is a brick." The war lasted for about thirty years and as a result the Athenians were defeated and compelled by the Spartans to pull down their long walls.

Sight translation:

Καὶ οἱ μὲν Ἀρκάδες διαπραξάμενοι πλοῖα παρὰ τῶν Ἡρακλεωτῶν πρῶτοι πλέουσιν, ὅπως ἐξαίφνης ἐπιπεσόντες τοῖς Βιθυνοῖς λάβοιεν, ὅτι πλεῖστα· καὶ ἀποβαίνουσιν εἰς Κάλπης λιμένα κατὰ μέσον τως τῆς Θράκης. Χειρίσοφος δ' εὐθὺς ἀπὸ τῆς πόλεως τῶν Ἡρακλεωτῶν ἀρξάμενος πεζῇ ἐπορεύετο διὰ τῆς χώρας· ἐπεὶ δὲ εἰς τὴν Θράκην ἐνεβαλε, παρὰ τὴν θάλατταν ἦει· καὶ γὰρ ἠσθένει. Ξενοφῶν δέ πλοῖα λαβὼν ἀποβαίνει ἐπὶ τὰ ὅρια τῆς Θράκης καὶ τῆς Ἡρακλεώτιδος καὶ διὰ μεσογείας ἐπορεύετο.

XENOPHON, *Anab.* B. vi.

Senior Greek.

1. Translate:

ὣς ἔφαθ', οἱ δ' ἀνστάντες ἔβαν πείθοντό τε μύθῳ.
αὐτὰρ ἐπεί ῥ' ἵκοντο δόμους ἐὺ ναιετάοντας,
χλαίνας μὲν κατέθεντο κατὰ κλισμούς τε θρόνους τε,
οἰδ' ἱέρευον ὄις μεγάλους καὶ πίονας αἶγας,
ἴρευον δὲ σύας σιάλους καί βοῦν ἀγελαίην,
δαῖτ' ἐντυνόμενοι. τοὶ δ' ἐξ ἀγροῖο πόλινδε
ὦτρύνοντ' Ὀδυσεύς τ' ἰέναι καὶ δῖος ὑφορβός.
τοῖσι δὲ μύθων ἦρχε συβώτης, ὄρχαμος ἀνδρῶν·
„ξεῖν', ἐπεὶ ἄρ δὴ ἔπειτα πόλινδ' ἰέναι μενεαίνεις
σήμερον, ὡς ἐπίτελλεν ἄναξ ἐμός· ἦ σ' ἂν ἐγώ γε
αὐτοῦ βουλοίμην σταθμῶν ῥυτῆρα λιπέσθαι·
ἀλλὰ τον αἰδέομαι καὶ δείδια, μή μοι ὀπίσσω
νεικείῃ· χαλεπαὶ δέ τ' ἀνάκτων εἰσὶν ὁμοκλαί.
ἀλλ' ἄγε νῦν ἴομεν· δὴ γὰρ μέμβλωκε μάλιστα
ἦμαρ, ἀτὰρ τάχα τοι ποτὶ ἕσπερα ῥίγιον ἔσται.“
τὸν δ' ἀπαμειβόμενος προσέφη πολύμητις Ὀδυσσεύς·
„γιγνώσκω, φρονέω· τά γε δὴ νοέοντι κελεύεις.
ἀλλ' ἴομεν, σὺ δ' ἔπειτα διαμπερὲς ἡγεμόνευε.
δὸς δέ μοι, εἴ ποθί τοι ῥόπαλον τετμημένον ἔστιν,
σκηρίπτεσθ', ἐπεὶ ἦ φάτ' ἀρισφαλὲ ἔμμεναι οὐδόν.“
ἦ ῥα καὶ ἀμφ' ὤμοισιν ἀεικέα βάλλετο πήρην,
πυκνὰ ῥωγαλέην, ἐν δὲ στρόφος ἦεν ἀορτήρ·
Εὔμαιος δ' ἄρα οἱ σκῆπτρον θυμαρὲς ἔδωκεν.
τὼ βήτην, σταθμὸν δὲ κύνες καὶ βώτορες ἄνδρες
ῥύατ' ὄπισθε μένοντες. ὁ δ' ἐς πόλιν ἦγεν ἄνακτα
πτωχῷ λευγαλέῳ ἐναλίγκιον ἠδὲ γέροντι,
σκηπτόμενον· τὰ δὲ λυγρὰ περὶ χροΐ εἵματα ἕστο.

Odyssey xvii. 177-203.

2. Explain the force of each of the particles in line 185; and show what effect is produced by the accumulation of them.

3. Parse *ὅις, μέμβλωκε, ἴομεν, ῥύατ', ἕστο.* Derive *διαμπερές, ἀρισφαλέα.*

4. Give the story of Eumaeus, describing his character and the conditions of his life.

5. Translate:

Τοὺς οὖν Θρᾷκας τοὺς τῷ Δημοσθένει ὑστερήσαντας, διὰ τὴν παροῦσαν ἀπορίαν τῶν χρημάτων οὐ βουλόμενοι δαπανᾶν εὐθὺς ἀπέπεμπον, προστάξαντες κομίσαι αὐτοὺς Διειτρέφει καὶ εἰπόντες ἅμα ἐν τῷ παράπλῳ (ἐπορεύοντο γὰρ δι' Εὐρίπου) καὶ τοὺς πολεμίους, ἤν τι δύνηται, ἀπ' αὐτῶν βλάψαι. ὁ δὲ ἕς τε τὴν Ταναγραίαν ἀπεβίβασεν αὐτοὺς καὶ ἁρπαγήν τινα ἐποιήσατο διὰ τάχους, καὶ ἐκ Χαλκίδος τῆς Εὐβοίας ἀφ' ἑσπέρας διέπλευσε τὸν Εὔριπον καὶ ἀποβιβάσας ἐς τὴν Βοιωτίαν ἦγε αὐτοὺς ἐπὶ Μυκαλησσόν. καὶ τὴν μὲν νύκτα λαθὼν πρὸς τῷ Ἑρμαίῳ ηὐλίσατο (ἀπέχει δὲ τῆς Μυκαλησσοῦ ἑκκαίδεκα μάλιστα σταδίους), ἅμα δὲ τῇ ἡμέρᾳ τῇ πόλει προσέκειτο, οὔσῃ οὐ μεγάλῃ, καὶ αἱρεῖ ἀφυλάκτους τε ἐπιπεσὼν καὶ ἀπροσδοκήτους μὴ ἄν ποτέ τινα σφίσιν ἀπὸ θαλάσσης τοσοῦτον ἐπαναβάντα ἐπιθέσθαι, τοῦ τείχους ἀσθενοῦς ὄντος καὶ ἔστιν ᾗ καὶ πεπτωκότος, τοῦ δὲ βραχέος ᾠκοδομημένου, καὶ πυλῶν ἅμα διὰ τὴν ἄδειαν ἀνεῳγμένων. ἐσπεσόντες δὲ οἱ Θρᾷκες τὴν Μυκαλησσὸν τάς τε οἰκίας καὶ τὰ ἱερὰ ἐπόρθουν φειδόμενοι οὔτε πρεσβυτέρας οὔτε νεωτέρας ἡλικίας, ἀλλὰ πάντας ἓξῆς, ὅτῳ ἐντύχοιεν, καὶ παῖδας καὶ γυναῖκας κτείνοντες, καὶ προσέτι καὶ ὑποζύγια καὶ ὅσα ἄλλα ἔμψυχα ἴδοιεν. τὸ γὰρ γένος τὸ τῶν Θρᾳκῶν, ὁμοῖα τοῖς μάλιστα τοῦ βαρβαρικοῦ, ἐν ᾧ ἂν θαρσήσῃ, φονικώτατόν ἐστι. καὶ τότε ἄλλῃ τε ταραχῇ οὐκ ὀλίγῃ καὶ ἰδέᾳ πᾶσα καθειστήκει ὀλέθρου, καὶ ἐπιπεσόντες διδασκαλείῳ παίδων, ὅπερ μέγιστον ἦν αὐτόθι καὶ ἄρτι ἔτυχον οἱ παῖδες ἐσεληλυθότες, κατέκοψαν πάντας· καὶ ξυμφορὰ τῇ πόλει πάσῃ, οὐδεμιᾷς ἧσσων, μᾶλλον ἑτέρας ἀδόκητός τε ἐπέπεσεν αὕτη καὶ δεινή.

Thucydides vii. 29.

6. Remark on the contents of this chapter.

7. Show the causes of the Athenians' failure in Sicily.

8. Translate :

καὶ γὰρ τὸν Κρήτηνδε κατήγαγεν ἷς ἀνέμοιο
ἱέμενον Τροίηνδε, παραπλάγξασα Μαλειῶν·
στῆσε δ' ἐν 'Αμνισῷ, ὅθι τε σπέος Εἰλειθυίης,
ἐν λιμέσιν χαλεποῖσι, μόγις δ' ὑπάλυξεν ἀέλλας.
αὐτίκα δ' 'Ιδομενῆα μετάλλα ἄστυδ' ἀνελθών·
ξεῖνον γάρ οἱ ἔφασκε φίλον τ' ἔμεν αἰδοῖόν τε.
τῷ δ' ἤδη δεκάτη ἢ ἐνδεκάτη πέλεν ἠὼς
οἰχομένῳ σὺν νηυσὶ κορωνίσιν Ἴλιον εἴσω
τὸν μὲν ἐγὼ πρὸς δώματ' ἄγων εὖ ἐξείνισσα
ἐνδυκέως φιλέων πολλῶν κατὰ οἶκον ἐόντων·
καὶ οἱ τοῖς ἄλλοις ἑτάροις, οἳ ἅμ' αὐτῷ ἕποντο,
δημόθεν ἅλφιτα δῶκα καὶ αἴθοπα οἶνον ἀγείρας
καὶ βοῦς ἱερεύσασθαι, ἵνα πλησαίατο θυμόν.

Odyssey xix. 185-198.

9. Make into Greek :

I knew that for all their eagerness they would flinch when it came to close quarters.

I wish we had some means of recruiting our crews.

Though they ought to have made a vigourous assault they remained inactive.

Do you think there is any chance of results proportionate to the risk involved in this undertaking?

Nikias in his letter gave the Athenians a very plain statement of the actual condition of affairs. By land they were more besieged than besiegers. By sea the splendid condition in which their fleet had arrived in Sicily had sadly fallen off. The ships long at sea had become water-logged, the efficiency of the crews had suffered for various causes—losses caused by the unfavourable position they had occupied at Plemmyrium, inferior rowers, accepted by the captains in place of individuals who had left the fleet and embarked in trade, and so forth. The Athenians must choose one of two alternatives, either to recall their present force, or to send reinforcements on a very liberal scale, and a large sum of money.

Junior French.

A.

Translate:

(*a*) Un jour j'étais allé visiter la fontaine égérie; la nuit me surprit. Pour regagner la voie appienne, je me dirigeai vers le tombeau de Cécilia Métella, chef-d'œuvre de grandeur et d'élégance. En traversant des champs abandonnés, j'aperçus plusieurs personnes qui se *glissaient* dans l'ombre, et qui toutes s'arretant au même endroit, disparaissaient subitement. Poussé par la curiosité, je m'avance, et j'entre hardiment dans la caverne où s'étaient plongés les mystérieux fantômes. Je vis s'allonger devant moi des galeries souterraines qu'à peine éclairaient de loin quelques lampes suspendues. Les murs des corridors funèbres étaient bordés d'un triple rang de cercueils, places les uns au-dessus des autres. La lumière lugubre des lampes rampant sur les parois des voûtes, et se mouvant avec lenteur le long des sépulcres, *répandait* une mobilité effrayante sur ces objets éternellement immobiles.

(*b*) Hier matin, comme j'étais au lit j'*entendis* frapper rudement à ma porte, qui fut soudain ouverte ou enfoncée par un homme avec qui j'avais lié quelque société et qui me parut tout hors de lui même. Son habillement était beaucoup plus que modeste; sa perruque de travers n'avait pas même été peignée; il n'avait pas eu le temps de faire recoudre son pourpoint noir, et il avait renoncé pour ce jour-là aux sages précautious avec lesquelles il avait contume de déguiser le délabrement de sou équipage.

(*c*) Dans le fond, cependant, la parvenue n'était ni une mauvaise femme ni une femme sans cœur, maintes fois, elle était venue en aide à son frere; peut-être celui-ci avait-il un peu abusé; toutes fois la soeur ne pourvait dire que trop de demandes l'avaient lassée; sa fortune lui permettait de se donner la satisfaction de faire du bien, même a des étrangers.

(*d*) Vous avez des malices de bourgeois, consues de fil blanc.—Nous nous tenions à cinquante mille francs.—une bagatelle.—vous m'avez mis tout sens-dessus-dessous.—vous avez la bouche cousue.—elle eut un haut le corps.—Lorsque je porte la main dans ce réduit, il est rare que je m'en tire de toute la journée.—Je le donne en quatre au plus hardi.

(*e*) Il en prit aux uns comme aux autres.—On voit bien où je veux venir.—Il n'était fils de bonne mère Qui, les payant à qui mieux mieux pour ses ancêtres n'en fît faire.—L'arbre tient bon.

1. Explain tense in italicised words in (*a*) and (*b*).

2. Give principal parts of *venir, permettre, dire.*

3. Explain form of *venue, abusé, lassée* (*c*).

4. Explain use of *ne* (line 1) and in *ne pouvait* [*c*].

5. Explain in French the expressions in (*e*).

B.

1. Translate into French :

(*a*) A wood-cutter went one day to the wood. He looked on all sides, as if he were seeking something. Whereupon the trees, with a curiosity some other creatures possess, asked him with eagerness what he was looking for. The wood-cutter replied that he needed a bit of wood to make a handle for his axe. The good trees deliberated, and finally it was resolved with a unanimous voice that the wood-cutter should have a piece of ash as good as they could find in the forest. Scarcely had he received it and adjusted the handle to his axe when he began to cut to the right and left so that in time he felled the finest and largest trees in the forest. It is said that then the oak spoke thus to the ash:—"Brother, there is the fruit of our foolish generosity. Shall we say with La Fontaine: 'We cry in vain, ingratitude will not be any the less in fashion,' or with Tourgeneff: 'Since the world has been a world—and it is a long time since then—Gratitude and Benificence have never met'?"

(*b*) You cannot command obedience if you get angry.—They treat him as a wretch, a brigand.—I have nothing to complain of for I was paid regularly, unknown to her husband.—They let themselves be taken in his clutches.—We are dying of cold.—She was anxious to be in time but she came near being late.—You must have a certain superiority over him to be able to do it.

2. Write in French a composition of about 200 words on *Le Million du Père Raclot or* "Un Hiver Canadien."

C.

1. Discuss briefly the style of *Le million du Père Raclot.*

2. Classfy the typical characters in *La Question d'Argent* showing briefly their relation to the main plot of the work.

3. Summarize in French "*L'Hirondelle et les petits Oiseaux,* or *Le Renard et la Cicogne.*

Quote *Le Loup et l'Agneau,* or *Le Chêne et le Roseau.*

Senior French.

A.

1. Translate into English:—

(*a*) Pierre s'amusait intérieurement de la déconvenue de Philippe, que celui-ci dissimulait de son mieux sous un air enjoué. Il ne se doutait pas de la simplicité, je dirai même de la rusticité des habitudes de nos propriétaires campagnards en ce pays et à cette époque. Marianne n'avait rien changé d'apparent à ses habitudes d'enfance. Longtemps elle n'avait pas eu d'autre salon que cette grande pièce à solives enfumées d'où pendaient des grappes d'oignons dorés, et au centre de laquelle, en guise de lustre, se balançait la cage à claire-voie où l'on met les fromages. Les paysans sont très-propres dans cette région. Si les poules et les canards pénètrent à tout moment dans l'intérieur, la ménagère, armée du balai, est incessamment sur pied pour les chasser et faire disparaître les traces de leur passage. Les lits et tous les meubles sont frottés et luisants, la vaisselle brille de netteté sur le dressoir; mais ces grands lits de serge jaune, fanés jusqu' à avoir pris la teinte feuille morte, la noire cheminée à crémaillère encombrée de pots, de chats et d'enfants, le dallage inégal et crevassé, la petitesse de l'unique fenêtre, l'écrasement d'un plafond garni de provisions et d'ustensiles qu'il faut éviter en marchant, tout cela n'offrait pas au jeune Parisien l'idée d'un bien-être suffisant, et il ne pouvait même pas rêver un atelier de peinture dans ce local sans lumière et sans élévation.

GEORGE SAND.

(*b*) Il l'accusait de manger son blé en herbe.—Elle se retint pour n'en pas rire aux éclats.—J'ai assez fait le gros dos et la patte de velours.—La langue vous a fourché.—J'ai des fourmis dans mon épée.—Je vous le donne en cent.—Elle grommela, tout en se défaisant avec activité de ses beaux atours.—Il me coûte les yeux de la tête.—Cet être-là a passé sa vie à faire l'école buissonière.—J'en serais alors pour mes frais d'abstinence.

2. Give equivalent French expressions or words for the following:—

L'âne à messer lion fit office de cor.—à l'entour de ton col.—en partage.—sa contingente part.—tous les avocats . . . y jettent leur bonnet.—afin qu'il fût . . . de meilleur debit.—un loup donc étant de frairie.—j'en veux faire à ma tête.

B.

1. Translate into French :—

(*a*) Before one o'clock, even on the hottest days, I used to start in the heat of the sun, hastening my steps in the fear that some one would take possession of me before I could escape. But when once I could turn a certain corner, with what a beating heart, with what a flutter of joy I began to breathe, feeling that I was safe, saying to myself, "Here now I am my own master for the rest of the day!" I then proceeded at a more easy pace in search of some wild spot in the forest, some desert place, some corner to which I could believe I was the first to penetrate and where no intruder could step in and interpose between Nature and me. It is there that she seemed to display before my eyes an ever new magnificence. The gold and purple of the heath appeared to me with a splendour that went straight to my heart. The majesty of the trees that covered me with their shadow, the delicacy of the shrubs that surrounded me, the astonishing variety of the herbs and flowers that I trampled beneath my feet attracted continually my observation and admiration. This assemblage of so many interesting objects, contending for my attention, fostered my dreamy humour and often made me repeat to myself, "No, even Solomon in all his glory was not arrayed like one of these."

(*b*) They succeeded in persuading her that she was practising great economy.—I shall pray to Him, before going to sleep, to tell mamma up above not to worry herself.—This house is worth more than it was a year ago.—I have no grudge against you, but I shall remember it.—Should he not have lighted the fire long ago.—He lends me some money at the rate of five per cent.—I regret that you called on me when I was not expecting it.—Have you made up your mind yet ?—Both uncle and nephew received a hearty welcome in the professor's house.—When they were fording the river one of the horses slipped and was drowned.—I approve of his conduct.—Go your way, and take my word for it.

2. Write in French a short composition (about 250 words) on

Les Frères Colombe,

or

La Mort de la Reine.

C.

1. Explain the general system of accentuation in French versification. Scan the following lines (marking accents and pauses) :—

"Ah ! . . . Paris fuit, nocturne et quasi nébuleux;
Le clair de lune coule aux pentes des toits bleus;
Un cadre se prépare, exquis, pour cette scène;
Là-bas, sous des vapeurs en écharpe, la Seine
Comme un mystérieux et magique miroir,
Tremble . . . Et vous allez voir ce que vous allez voir!"

2. Write a brief criticism of *Cyrano de Bergerac.*

3. Give in French a *résumé* of the fables bearing on "Il faut, autant qu'on peut, obliger tout le monde."

PASS.

French.

Junior and Senior Dictation.

Un homme avait trois amis ; deux lui étaient surtout très chers, le troisième lui était indifférent, quoique celui-ci lui portât un sincère attachment. Un jour, il fut appelé en justice. "Qui de vous," dit-il à ses amis, "veut venir avec moi et témoigner en ma faveur, car une grave accusation pèse sur moi ?"

Le premier de ses amis s'excusa à l'instant de ne pouvoir l'accompagner, étant retenu par d'autres affaires.

Le second le suivit jusqu'aux portes du palais de justice ; là il s'arrêta et retourna sur ses pas. Le troisième, sur lequel il avait le moins compté, entra, parla en sa faveur et témoigna de son innocence avec tant de conviction que le juge le renvoya absous.

L'homme a trois amis en ce monde; comment se comportent-ils à l'heure de la mort? L'argent, le plus aimé de tous, le délaisse d'abord, et ne va pas avec lui. Ses parents et ses amis le suivent jusqu'aux portes du tombeau et reteurnent dans leurs demeures. Le troisième l'accompagne jusqu'au trône du souverain Juge: ce sont ses bonnes oeuvres.

Junior German.

I.

Translate into English:

(*a*) Ich stieg nachdenklich aus dem Wagen und ging ein paar Schritte längs der Mauer hin nach dem hohen Gitterportal, das den Garten verschloss. Durch die alten Eisenstäbe von schwerer mittelalterlicher Arbeit konnte ich ein Stück des Parks übersehen und das Haus, das mit verschlossenen Jalousieen mitten zwischen Ulmen und Akazien stand. Ich rüttelte am Schloss, das nicht zu öffnen war, und meine Hand fasste schon nach dem Klingelgriff, als mich eine geheime Scheu überfiel, das Innere dieses fremden Bezirks zu betreten. Und was hätte ich für eine Figur gemacht, wenn man mich um den Grund meines Eindringens befragt hätte? So begnügte ich mich, ein Weilchen zu warten ob die Zweigwerferin sich nicht irgendwo blicken lassen würde, und betrachtete indessen das Haus, an dem nichts Merkwürdiges war, so genau, als ob ich es zeichnen wollte, bis die Sonne mir unerträglich wurde und mich unter mein Schirmzelt zurücktrieb. HEYSE.

(*b*) Es fand sich, was sich paszte, und man wallte dem rosenumblüh'ten Hügel zu.—Er wollte hier das Vermögen das er gesammelt, zum Prunk ausstellen, und es fiel sogar ihm ein, mit mir wetteifern zu wollen.—Meine Stiefel nutzen sich nicht ab.—Darum zog sie andre Saiten auf, sprach freundliche Worte u.s.w. —Eigentlich ist es eine Sünde, Singvögel ums Leben zu bringen. —Er hätte einen Finger darum gegeben, wenn er den mit dem Forstgehilfen geschlossenen Pakt wieder rückgängig hätte machen können.—Mit dem biszchen Nebel wird sie (die Sonne) schon fertig werden.—Und jener Maler, hast du ihm auch zugetraut, dass er dir hart begegnen würde.—Sie machte sich an ihrem Rock zu schaffen.—Was frommt's zu leben, da jung Sigwalt tot!—Darum glaub' ich deinem Wort, auch was nicht glatt zu glauben.

II.

Translate into German:

(*a*) It was expected that, being wearied of his prison, he would gladly endeavour to persuade his countrymen to discontinue the war. He was accordingly sent with the ambassadors to Rome, but had to promise that he would return in case of being unsuccessful. He was even given to understand that his life depended upon the success of his expedition. When he approached the

city many of his old friends turned out to see him, but Regulus refused to enter the gates and share in the joy which his return had inspired. He kept saying that he was now but a slave of the Carthaginians (Karthager) and unfit to partake in the honours of his country. The senate, weary of a war which had lasted eight years, were inclined to a peace. It seemed the general opinion that the enmity between the two states had contiued too long and that nothing should be refused which might give liberty to a brave old general whom the people reverenced and loved.

(*b*) After I had dressed myself in my best clothes, I set out on my way to the city.—His work consists in making shoes.—He might have died of fever if the doctor had not seen the danger.—She got up again before the sun rose and closed the window.—He never succeeded in learning to write well.—Nobody troubled himself about me.—I was ashamed to return home, for the sun stood already high in the sky.—I enquired for the way.—He passed her on the street, but she did not look at him.—I do not agree.

(*c*) Write in German a short composition on *Sigwalt und Sigridh*, or "Wie ich den Sommer zubringen werde."

III.

1. Give an appreciation of Baumbach as a story teller.
2. An account of the life and work of Felix Dahn.

Senior German.

A.

Translate into English:

(*a*) Dieses Verhältnisz, reizvoll und fruchtbar für beide Theile, ist die edle Poesie, welche die Wissenschaft ihren Bekennern gönnt. Fremde und spätere Menschen, welche den Werth eines Mannes nur nach seinen Büchern beurtheilen, erhalten, wie hoch auch der Gelehrte selbst diese Art von Ueberlieferung schätzen möge, doch nur ein unvollständiges Bild des Entfernten; weit anders wirkt der lebendige Quell schöpferischer Kraft auf die Seelen solcher, welche von Lippe und Auge des Lehrers sein Wissen empfangen. Nicht nur der Inhalt seiner Lehre bildet sie, mehr noch seine Art, zu suchen und darzustellen, am meisten sein Charakter und die besondere Weise des Vortrags. Denn diese erwärmen dem Hörer das Herz und senken ihm Achtung und Neigung in das Gemüth. Solcher Abdruck eines menschlichen Lebens, der in Vielen zurückbleibt, ist für Arbeitsweise und Charakter der Jüngeren oft wichtiger, als der Inhalt empfangener Lehre. In den Schülern arbeitet das Wesen des Lehrers neues Leben schaffend fort, seine Vorzüge, zuweilen auch Eigenheiten und Schwächen. In jedem Hörer färbt sich anders das charakteristische Bild seines starken Meisters, und doch ist in jedem Schüler der Lehrer, der an dieser Seele formte, vielleicht bis zur kleinen Absonderlichkeit erkennbar.

FREYTAG.

(*b*) Alles ward . . . dem guten Schneider aufs Kerbholz gebracht. —Es hiesz, der Genusz der günstigen Stunde sei sich zu gönnen.— Den roten Hahn haben sie ihm schon längst aufs Dach gesetzt.— Die Schrandener sind gerade dazu angethan, einem die Rachsucht abzugewöhnen.—Andere meinten, es würde dem Kreise zur Schande gereichen, wenn so was an die grosze Glocke gehängt würde.—Und morgenden Tags werde ich bei Schultheiszen und Rath mich beschweren, dass . . . der ruhigste Bürger . . nicht sicher ist, bei nachtschlafender Zeit von der Wache heimgesucht und der Hehlerei bezichtigt zu werden.—Ich aber will mich auf raffen.—Das Riesen-Fräulein erging sich sonder Wartung.

B.

1. Translate into German:

(*a*) On parting with the old angler I inquired after his place of abode; and, happening to be in the neighborhood of the village a

few evenings afterwards, I had the curiosity to seek him out. I found him in a small cottage containing only one room, but a perfect marvel in its method and arrangement. It was on the skirts of the village, a little back from the road, and had a small garden in front stocked with vegetables and adorned with a few flowers. The interior was fitted up in a truly nautical style, his ideas of comfort having been acquired on the deck of a war-ship. . .

How comforting it is to see a cheerful and contented old age and to behold a poor fellow like this, after being tempest-tossed through life, safely moored in a quiet harbour in the evening of his days! His happiness, however, sprang from within himself and was independent of external circumstances; for he had that inexhaustible good-nature which is the most precious gift of Heaven, and which, spreading itself like oil over the troubled sea of thought, keeps the mind smooth and equable in the roughest weather.

(*b*) As he approached the house the stranger vanished in the distance.—It depends on what you do.—He has been obliged to go out and seek work.—The knight could ride past his own fields for hours.—You may play to your heart's content.—His honour is at stake.—That does not concern me at all.—The troop of soldiers who came riding along the highway excited great astonishment in all the villages.—He never became accustomed to carrying a gun around with him.—She has not done anything which could have vexed him.

2. Write in German a short composition on *Kleider Machen Leute*, or "Ein Ausflug im Sommer."

C.

1. Consider Sudermann's treatment of the character Regina. What are the essential characteristics of the style in *Der Katzensteg?*

2. Comment on the naturalness of Heyse's treatment of his subject in *Der Verlorene Sohn.*

3. "Alle Zivilisation der Menschheit entspringt aus den Individualitäten" (Hildebrand). Explain. What would be the result in a communistic society?

Quote *Die Grenadiere*, or *Das Schlosz Boncourt.*

PASS.

German.

Junior and Senior Dictation.

Ich war ein eifriger Spaziergänger und wählte fast immer einen und denselben Weg; man lernt dabei jeden Stein und jedes Blatt am Wege kennen, man empfindet doppelt die belebende Wonne des Frühlings, wenn man den Busch, den man im Winter wie einen Besen zum Himmel ragen sah, mit Knospen sich bedecken sieht; man beobachtet, wie von gestern zu heute die Knospen aufgebrochen sind, wie sich Blättchen ansetzen, wie sie immer grösser wachsen, immer dunkler sich färben, und so, jeden Tag in die lautlose Werkstatt der schaffenden Natur blickend, liest man von Tage zu Tage wie an einer grossen Uhr den rastlosen Wandel der Zeit. Ob diese Empfindungen es waren, die auch ihn bewegten, den Weg, den ich mir zum Spaziergang ersehen hatte, regelmässig, beinahe täglich zu gehen, ich weiss es nicht; jedenfalls aber musste der Weg auch ihm gefallen, und er war auch hübsch genug.

PASS.

Junior English.

I.

It must be by his death: and for my part,
I know no personal cause to spurn at him.
But for the general. He would be crowned:
How that might change his nature, there's the question.
It is the bright day that brings forth the adder;
And that *craves wary walking.* Crown him:—*that:*—
And then I grant we put a sting in him,
That at his will he may do danger with,
The abuse of greatness is, *when it disjoins*
Remorse from power: and to speak truth of Caesar,
I have not known when *his affections swayed*
More than his reason. But tis a common proof,
That lowliness is young ambition's ladder,
Whereto the climber-upward turns his face;
But when he once attains the utmost round,
He then unto the ladder turns his back,
Looks in the clouds, *scorning the base degrees*
By which he did ascend. So Caesar may,
Then, lest he may, *prevent.*

1. Explain carefully the meaning and application of the phrases in italics.

2. What can be gathered from the passage—

(*a*) As to the character of the speaker?

(*b*) As to the speaker's estimate of Caesar's character.

3. Distinguish between the motives which led Brutus and Cassius respectively into the conspiracy against Caesar. Describe Cicero's character as conceived by Shakespeare, with quotations.

4. Explain, in connection with the context, any four of the following:—

(*a*) Beware the ides of March.
(*b*) He doth bestride the narrow world like a colossus.
(*c*) Our course will seem too bloody Caius Cassius.
(*d*) When beggars die there are no comets seen.
(*e*) Now let it work;—mischief, thou art afoot,
Take thou what course thou wilt!—

(*f*) But, for your words, they rob the Hybla bees,
And leave them honeyless.

II.

5. Give a short description of the Merchant in the Prologue, and explain the following extracts, mentioning the personages to whom they refer.

(1) Full fetis was her cloke, as I was war.
(2) So pleasant was his "In principió,"
Yet wolde he have a ferthing er he wente
(3) And that was seyd in forme and reverence,
And short and quik and full of hy sentence.
(4) At many a noble aryve hadde he be
(5) He rood upon a rouncy as he couthe.
(6) Ne of his speeche daungerous ne digne.

6. Explain the meaning and application of following sentences from Bacon's Essay of Truth:—

(1) Truth may perhaps come to the price of a pearl, that sheweth best by day.
(2) One of the fathers, in great severity, called poesy "vinum daemonum."

State Bacon's general point of view in this essay and criticize it.

III.

7. Give Carlyle's estimate of Lockhart's biography of Burns, its merits and defects. State precisely Carlyle's own ideal of biography as expressed in his essay.

8. Characterize the style (1) of Bacon, (2) of Washington Irving.

9. Punctuate the following sentences:—

Alas he cried has it come to this that Belisarius Belisarius the greatest of generals must beg his bread.

In that same village and in one of these very houses which to tell the truth was sadly time-worn and weather-beaten there lived many years since while the country was yet a province of Great Britain a simple good-natured fellow of the name of Rip Van Winkle.

10. Tell what you know of the following personages: —Hans Sachs, Sir Thomas Lucy, "The Foresters of Flanders," Van Artevelde, Count Arnaldos, Allan Ramsay, The Borgias, Richardson. Quote any two stanzas from "The Secret of the Sea."

Senior English.

1. I.

(*a*) But thou, O Hope, with eyes so fair,
What was thy delighted measure?
Still it whispered promised pleasure,
And bade the lovely scenes at distance hail!
Still would her touch the strain prolong;
And from the rocks, the woods, the vale,
She called on Echo still, through all the song.

(*b*) There from the sun-burnt hay-field homeward creeps
The loaded wain; while, lighten'd of its charge,
The wain that meets it swiftly passes by;
The boorish driver leaning o'er his team
Vociferous and impatient of delay.

(*c*) They're no sae wretched's ane wad think;
Though constantly on poortith's brink:
They're sae accustomed wi' the sight,
The view o't gies them little fright.

(*d*) Poems I heeded (now be-rym'd so long)
No more than thou, great George! a birth-day song,
I ne'er with wits or witlings pass'd my days,
To spread about the itch of verse and praise.

(*a*) Name the poems from which the above extracts are taken; name the measures in which the poems are written, and explain the allusions in extracts (*c*) and (*d*).

(*b*) Characterize the qualities of the verse in extract (*b*).

2. "Dryden did for English literature what Augustus did for Rome; found it brick and left it marble."

(*a*) Explain precisely what qualities in Dryden's work Dr. Johnson had in view in this statement.

(*b*) Would you limit the statement in any way? Give reasons for your answer.

II.

3. Give a list of Dr. Johnson's works, and notice the chief points in Carlyle's estimate of his character and his influence on his countrymen.

4. What is the measure Gray uses in his *Elegy*? Explain carefully the qualities of his rhythm in that poem, and compare its diction with that of Goldsmith's in *The Deserted Village.*

5. Criticise any two of the following as imitations of the ancient Ballad: Tickell's *Lucy and Colin;* Scott's *Lochinvar;* Wordsworth's *Ruth.*

6. III.

O, what a rogue and peasant slave am I!
Is it not monstrous that the player here,
But in a fiction, in a dream of passion,
Could *force his soul so to his own conceit,*
That *from her working all his visage wann'd*
Tears in his eyes distraction in's aspect,
A broken voice, and *his whole function suiting*
With forms to his conceit? And all for nothing!
For Hecuba!
What's Hecuba to him, or he to Hecuba,
That he should weep for her? What would he do
Had he the motive and the *cue for passion*
That I have? He would drown the stage with tears,
And cleave the general ear with horrid speech;
Make mad the guilty and appall the free,
Confound the ignorant, and amaze indeed
The very faculties of eyes and ears.

(*a*) Show clearly the position of this soliloquy in the play.

(*b*) Explain clearly the significance of the phrases italicised.

7. Discuss Shakespeare's use of the comic or grotesque element in this tragedy.

8. Explain clearly, by reference to the character and situation of the speaker, the following passages:

(*a*) Whilst like a puff'd and reckless libertine
Himself the primrose path of dalliance treads
And recks not his own read.

(*b*) The time is out of joint.

(*c*) O, woe is me
T'have seen what I have seen, see what I see.

(*d*) My words fly up, my thoughts remain below:
Words without thoughts never to Heaven go.

(*e*) If thou didst ever hold me in thy heart,
Absent thee from felicity awhile,
And in this harsh world draw thy breath in pain
To tell my story.

IV.

9. Give a four-column analysis (origin, oldest and middle-English forms, &c.) of the following words: *angel*, *priest*.

10. Translate the following extracts from Robert of Gloucester:

(*a*)
*Th*e cite he barnde al clene · and an chirche al-so
Of ur leuedi, that ther-inne was · and an auncre, Godes spouse.
That nolde vor no thing · fle out of hire house.

(*b*)
His leches lokede is stat · as hor rizt was to done,
And iseye and sede also · *th*at he ne mizte ofscapie nozt.

Give the older forms of "leuedi" and "rizt," as well as their modern forms, and explain the changes.

11. Estimate the proportion of native and foreign elements in the following passage from Chaucer, with remarks on the different use of each element. Underline the words of foreign origin.

For he had geten him yet no benefice
Ne was so worldly for to have office.
For him was lever have at his beddes heed
Twenty bokes clad in blak or reed
Of Aristotle and his philosophyë,
Than robes riche or fithel or gay sautryë.

PASS.

Junior History.

1. Distinguish between the civilization of the eastern and the western parts of the empire. How did this distinction show itself in the eastern and western Churches?

2. Point out the growth of the Royal power in France (1) territorially, (2) judicially, (3) in legislation, (4) in regard to the Gallican Church.

3. What were the functions of the States General in France? Why did they exercise so little power?

4. State why the sources and administration of the revenue in France tended to confirm the absolution of the crown, instead of, as in England, controlling the crown.

5. Hallam says: "The changes wrought in the constitution during the period of the Swabian emperors chiefly consist in the establishment of an oligarchy of electors, and of the territorial sovereignty of the princes." Explain this.

6. Explain the circumstances by which the Italian cities became subject to princely families.

7. What was the constitution of the Directory and of the Legislature in France in 1795? What were their relations to each other, and what were the functions of the Directory?

PASS.

Senior History.

1. In Canute's reign the boundaries between England and Scotland were arranged. What had they been before? On what conditions was the eastern part ceded to Scotland? How did this affect the future relations of the Scotch and English kings?

2. Who constituted the county court, its officers, &c.? What were its functions?

3. What were the results of William I.'s separation of the clergy from the secular courts?

4. What changes did Henry II. make in regard to knights service, in the administration of justice, and in the relations of Church and State?

5. What was the general result of the confiscation of the monasteries by Henry VIII.?

6. Explain Elizabeth's conduct in regard to the French Protestants and the Netherlands.

7. What is meant by responsibility of ministers? Compare in this respect Cabinet Government in England with Cabinet Government in the United States.

8. What is the mode of electing the President laid down in the Constitution of the United States? How has it become essentially a popular election?

9. Discuss the Quebec Act of 1774.

10. By the British North American Act what authority has the Federal Government over the Provinces?

PASS.

Junior Philosophy.

Intra-murals.

1. Give and explain your definition of philosophy.

2. Trace the theory of contract or convention to its origin in Greek thought. Criticise the theory.

3. Examine the doctrine of Protagoras that every man's opinions are for him true.

4. Outline and discuss Plato's proof for the existence of God.

5. Give and interpret Aristotle's conception of the mean.

6. Expound Aristotle's scheme of the intellectual virtues. Is his theory of happiness a theory of selfishness?

7. What is the significance of the idea of "entelechy" in Aristotle's philosophy? Add illustrations and any remarks or suggestions.

Extra-murals.

(Extra-murals will answer any five of the foregoing questions along with questions 8 and 9 below.)

8. How, according to Descartes, does philosophy begin? Discuss the point.

9. What is "Subjective Idealism?" Can you outline a more adequate theory of reality?

PASS.

Senior Philosophy.

(Only seven of these questions to be done.)

1. "Poetry is more philosophical than history." Explain this saying of Aristotle.

2. Criticise Comte's view of the relation of theology, metaphysic, and science.

3. "Every attempt to reduce extension to simultaneity, or apparent simultaneity, of impressions owes its plausibility to the assumption of what it intends to explain." Apply this criticism to Mill's account of extension.

4. "The idea of final cause implies that the fixed conditions under which changes occur in the living being are subservient to an end." Give reasons for this statement.

5. "The inner life of the subject is the outer life regarded from the point of view of its relation to a knowing subject." Show the bearing of this principle on Mill's "law of contiguity."

6. "In idea man is a member of the intelligible world." Explain this view by reference to Kant's doctrine.

7. "It is the *motive* that makes the man good, not the *object* sought." Show how Kant reaches this conclusion. Criticise his doctrine.

8. "Freedom of will is a fundamental fact of consciousness." Explain and examine the view here indicated.

9. Give instances of Kant's distinction between duties

of (*a*) perfect, and (*b*) imperfect obligation. Is the distinction tenable?

10. "I cannot make my inner being an object of knowledge." State Kant's reasons for holding this view.

11. "Evil consists in a perversion of the proper relations between reason and desire." Is Kant consistent in holding this doctrine? Is it satisfactory?

12. State and examine the ethical doctrine of Hobbes.

Junior Political Science.

4. What are the characteristic features of economic laws as compared with physical laws?

2. Distinguish the economic from the other aspects of human wants.

3. What is included under the term *skilled labour?* What effect has *skill* in determining the rate of wages?

4. How are the banking institutions of North America related to its general prosperity?

5. What are the chief causes leading to the organization of industry on a large scale? Estimate the economic effects of this movement.

6. State and explain the modern relations between profit and interest.

Alternative Questions for Extra-mural Students.

(*a*) Explain the operation of the bimetallic standard in (*a*) domestic exchange, (*b*) international exchange.

(*b*) How did the Industrial Revolution in England affect the agricultural interests of the country?

Senior Political Science.

Intra-mural.

1. How is the state related to the other organs of society?

2. What is the full significance of Aristotle's statement that independence is first attained in the state?

3. Compare the theories of Aristotle and Rousseau as to the functions of the legislator.

4. What are the characteristic features of sovereignty? How is it expressed in (*a*) Britain, (*b*) Canada, (*c*) the British Empire?

5. Society realizes itself only in the individual. Explain.

6. How are negative and positive rights related?

PASS.

Junior Mathematics.

(At least 25 per cent. must be made in each section, and 40 per cent. on the whole.)

A.

1. Expand $(1+x)/(1-x)^3$ into a series, and write the nth term of the series.

2. Simplify the surd expressions $1/(1-\sqrt{2}+\sqrt{3})$, and $\sqrt{4+2\sqrt{3}}$.

3. The side of an isosceles triangle is 5 times the altitude, and the base is 100, to find the area.

4. By means of the graph find the characters of the roots of $x^3+3x^2-x-4=0$.

5. Solve the equation $bx^2-ax(1+b^2)+a^2b=0$; and form the equation whose roots are the reciprocals of these roots.

6. A right-angled triangle has its hypothenuse 16 ft. Find its form and its area when its area is a maximum.

7. $13x+9y=97$ has one solution in integers. Find it.

8. Solve the equations:—

(*a*) $ax+by+z=c$, $bx+y+cz=a$, $x+cy+az=b$, finding x only, and reduced to simplest terms.

(*b*) $x-y=8$, $x^3-y^3=2072$.

9. Find the sum of (*a*) n consecutive odd numbers beginning with 1; (*b*) of n consecutive even numbers beginning with 0.

10. State the five cases of congruence of triangles, and explain why, in geometry, it is necessary to prove these.

11. (*a*) A quadrangle which has its opposite angles supplementary is concyclic.

(*b*) Show how this property may be employed to describe a circle.

12. Find the distances from the vertices to the points at which the sides of a triangle are touched by the incircle.

13. (*a*) In a right angled triangle the square on a side is equal to the rectangle on the hypothenuse and the projection of the side on the hypothenuse.

(*b*) A point is 12 ft. from the centre of a circle and the chord of contact for the point is 3 feet from the centre. Find the radius of the circle.

14. Prove that the area of any triangle is $\sqrt{s(s-a)(s-b)(s-c)}$, where s is the half-perimeter.

15. AB and CD are diameters of two circles having $ABCD$ a common centre line. Show that the rectangle $AC \cdot BD$ is equal to the square on the common direct tangent, and $AD \cdot BC$ equal to the square on the common transverse tangent.

16. Draw a square to be equal to a given triangle.

PASS.

Senior Mathematics.

(At least 25 per cent. must be made on each section, and 40 per cent. on the whole.)

A.

1. In two *A.P.*s if $(a—a')/(d—d')=—p$, where p is an integer, the $(1+p)th$ term is common, and the sum of $(1+2p)$ terms is common.

2. Find the coefficient of x^0 and x^r in the expansion of $(x+1/x)^n$.

3. (*a*) Prove that the difference between the convergents v_n and v_{n+1} is less than $1/Q_n{}^2$.

(*b*) Find multiples of 19 and 33 that shall differ by 5.

4. Develope $\log(1+x)$ in ascending powers of x.

B.

5. Prove the relations for the triangle,

(*a*) $\sin A:\sin B:\sin C=a:b:c.$

(*b*) $a^2=b^2+c^2-2bc\cos A.$

(*c*) $\cos\frac{1}{2}A=\sqrt{\left\{\frac{s(s-a)}{bc}\right\}}$

6. The sides of a parallelogram are a, b, and the angle between them is θ. Show that the tangent of the angle between the diagonals is $2ab\sin\theta/(a^2—b^2)$.

7. A rope stretched from A to B supports a weight W, not at its middle point, and the inclinations of the parts of the rope are α and β to the horizontal line. Find the tensions of the parts of the rope.

8. Assuming the addition theorem, prove,

(*a*) $\sin A+\sin B=2\sin\frac{1}{2}(A+B)\cos\frac{1}{2}(A—B.)$

(*b*) $\sin n\theta=2\sin(n—1)\theta\cos\theta—\sin(n—2)\theta.$

C.

9. The bisectors of the verticle angle of a triangle divide the base into segments which are proportional to the sides.

10. Find the radius of the circumcircle of the triangle whose sides are 13, 14, 15.

11. Describe Peaucellier's cell, and prove that the tracing point describes a straight line.

12. The areas of similar triangles are proportional to those of the squares on homologous sides.

D.

13. (*a*) Prove Euler's theorem $C+F=E+2$.

(*b*) The faces of a regular polyhedron are pentagons; calculate the number of its edges and its corners.

14. Prove that the diameters and the medians of a tetrahedron all pass through one point.

15. Find an expression for the volume of a prismatoid, and indicate some applications of the formula.

Junior Physics.

Properties of Matter, Dynamics, Heat, Magnetism, and Frictional Electricity.

1. Define impenetrability, wave, sidereal day, electric potential, specific inductive capacity, temperature, and thermal conductivity.

2. A body is projected vertically upwards with a speed of 98 metres per second. Neglecting atmospheric resistance, find (1) the greatest height reached, (2) the distance travelled in the fourth second of its motion, (3) when its velocity will be 490 tachs downwards: $g=980$.

3. Define inertia and centrifugal force. How would you illustrate these experimentally? Is the latter really a force? Explain the origin of the name.

4. Define force and enunciate the law from which we get our measure of force. Enunciate and illustrate the Conservation of Momentum.

5. Describe Torricelli's experiment whereby he first measured the pressure of the atmosphere. State in gravitation and in absolute measure the mean sea-level atmospheric pressure over the earth's surface. A small piece of glass gets into a mercurial barometer and floats; is the reading vitiated thereby? Explain your answer.

6. To a man walking at 4 miles per hour the rain seems to strike him at an angle of 45°. When he reduces his speed to one half, the rain seems to fall vertically; find the velocity of the rain.

7. Define the specific heat of a substance. If the s.w. of air be $1{\cdot}2\times10^{-3}$, and its s.h. be 0·238, find how

many litres of air would be warmed through 1° by a litre of water cooling through 1°.

8. Define latent heat. What is meant by saying that the l.h. of water is 79? Find how many cubic feet of air would be cooled through 1° in melting a cubic foot of ice at —1°.

9. Define the mechanical equivalent of heat. Give its value. Explain how to determine it in terms of the specific heats of air at constant pressure and at constant volume.

10. What is convection (1) of heat, (2) of electricity? How would you illustrate these experimentally?

11. Define (1) magnetic induction, (2) electric induction, and state in what respects they differ from one another.

12. Define the magnetic equator and the agonic line. Name one place on each. State all you know about change of magnetic declination with time and place.

13. Name the points of the mariner's compass. What is the correction for the ship's magnetism called?

14. Explain how Franklin proved that lightning and thunder are the noise and spark of an electric discharge on a large scale.

15. Explain the storage of electricity in a condenser. In what respect does an ordinary insulated conductor differ from a condenser, which accounts for the greater electric capacity of the condenser?

Senior Physics.

Dynamics, Electricity, Light, and Sound.

1. Enunciate the conservation and degradation of energy, and the law of friction between plane surfaces.

2. A railway train of 1000 tons, in passing over a certain mile, had its speed increased from 30 to $37\frac{1}{2}$ miles per hour. If the average friction were 9 pounds-weight per ton, find the work done by the engine in passing over the mile.

3. A jet of water is projected against an embankment so as to strike it normally. If the speed of the jet be 2500 tachs, and 50 kilograms of water strike the embankment per second, find the pressure of the water against the embankment, (1) when the water does not rebound, (2) when it rebounds with a speed of 500 tachs.

4. Define a dimensional equation. If a metre, kilogram, and minute were the fundamental units, find, by means of dimensional equations, what numbers would express the mean value of g and the mean atmospheric pressure at the sea-level?

5. When three forces are in equilibrium, their lines of action are coplaner. Prove this, and thence prove that, if a uniform triangular plate be suspended from a point by strings attached to its angular points, the tensions of the strings are proportional to their lengths.

6. In the *first system of pulleys* each pulley is supported by a separate rope, one end of which is fixed to the beam and the other to the block of the pulley above. If the lines of rope be all parallel, find the mechanical advantage, (1) when the weights of the pulleys may be neglected,

(2) when the weight of each pulley is w. Find also the stress of the supporting beam.

7. Describe the electrolysis of sulphate of copper, and explain therefrom the process of copper-plating.

8. Prove that in arranging a battery of voltaic cells, the greatest current is obtained when the internal resistance is equal to the external.

9. Enunciate the law or laws relating to the induction of electric currents, and apply it to explain the high potential of the currents given by a Ruhmkorff coil.

10. Explain from the law of reflection the symmetry of the figures seen in a kaleidoscope.

11. What is the critical angle in refraction of light? Determine its relation to the index of refraction. Explain how it may be determined geometrically.

12. Tell all you know about the dispersion of light.

13. What is resonance? How would you illustrate it experimentally (1) by means of simple pendulums, (2) by means of cylindrical hollow vessels.

14. The whistle of an express train is sounding as the train is passing a station. The pitch is observed to suddenly change. Does it rise or fall? Shew how to calculate the change of pitch.

15. Define the character of a musical sound. To what does it correspond in the science of light? How would you represent it geometrically?

PASS.

Junior Botany.

SECOND PAPER.

Practical Botany.

1. Make a list of the plants in the bundle submitted, giving (1) the ordinal, (2) the generic, and (3) the specific names according to the following form :—

No.	Ordinal.	Generic.	Specific.

2. Select from the bundle one plant from each of the following families and describe it as fully as you can :—

1. Ranunculaceæ.
2. Rosaceæ.
3. Compositæ.
4. Liliaceæ.

PASS.

Animal Biology.

(Extra-mural students will omit the first question.)

1. What are the advantages of social life among animals? Illustrate.

2. Point out resemblances and differences between animals and plants in (*a*) processes of waste and repair, (*b*) in their relation to environment, and (*c*) in the production of new individuals.

3. Indicate the position and relations of the viscera in the common perch.

4. What structural characters in birds shew their relationship to pre-existing animals.

5. Outline the anatomy of the mammalian brain.

6. Sketch by aid of diagrams the anatomy of the fresh water clam.

For Extra-murals.

1. Describe the exoskeleton of a common grasshopper.

PASS.

Junior Chemistry.

1. (*a*) An oxide of indium was found to contain 17 39 per cent. of oxygen. The specific heat of the metal is 0·05695. From these data calculate the accurate atomic weight of indium. (*b*) Find the formula of the oxide mentioned. [Symbol, *In.*]

2. (*a*) Give a classification of chemical changes. (*b*) Give a definition and an example of each class.

3. (*a*) Write the equation for the combustion of ammonia in oxygen and deduce the relative gaseous volumes of all the substances. (*b*) Do the same for the combustion of sulphuretted hydrogen in oxygen.

4. (*a*) What is an alcohol? (*b*) Describe the chemical changes which take place in the manufacture of common alcohol from grain.

5. (*a*) Give a theoretical and practical definition of a *tribasic acid.* (*b*) Write the formulas of the sodium orthophosphates.

6. (*a*) Describe carefully the way in which you would make a specimen of chlorine. (*b*) Why is chlorine water kept in dark coloured bottles? Explain fully. (*c*) What substances are formed when chlorine acts on ammonia? Equation.

7. (*a*) How is sulphur trioxide manufactured? (*b*) What substance is formed by its combination with water? (*b*) By its combination with calcium oxide? Equations.

8. (*a*) Define *alkali, base, hydrocarbon, carbohydrate,*

and *normal salt*. (*b*) Write the formula for *normal* sodium carbonate. Is this salt also *neutral?* Explain.

9. (*a*) Write the formulas of the following:—(1) Potassium (K) nitrite, (2) ammonium sulphate, (3) sodium (Na) acetate, (4) calcium chloride, and (5) potassium perchlorate. (*b*) Calculate the percentage composition of ammonium sulphate. [N=14, S=32, O=16.]

10. Write a short account of the different experimental methods for finding molecular weights.

Senior Chemistry.

A.

1. (*a*) Classify chromium compounds, giving examples of each class. (*b*) How is chromium made? (*c*) Give a short description of the manufacture of potassium bichromate.

2. (*a*) Give the name and formulas of the ores of lead. (*b*) Write a short description of the manufacture of white lead.

3. Write equations for the following reactions:—(*a*) Oxidation of an acid solution of ferrous sulphate by potassium permanganate. (*b*) Reduction of solution of ferric chloride by stannous chloride. (*c*) Electrolysis of cupric sulphate solution. (*d*) Electroplating with silver. (*e*) Reduction of zinc from zinc blende.

B.

4. The percentage composition of an organic acid is as follows:—

Carbon, 54.54 per cent.
Hydrogen, 9·09 "
Oxygen, 36·37 "

Its gas density is 3·05 (*Air*=1). Calculate the formula. Write it graphically, and give the name of the acid.

5. Write the equation for the explosive decomposition of nitroglycerine, and calculate the volume of gas (NTP) from 10 grammes of nitroglycerine.

6. (*a*) Write the equations for the manufacture of aniline from benzene. (*b*) What substance is formed by the action of nitrous acid on aniline nitrate? *Equation.*

7. By what reactions can methyl alcohol be converted into ethyl alcohol? *Equations.*

8. (*a*) Write a graphic formula for glycerine. (*b*) What substances can be obtained by the action of phosphorus trichloride on glycerine? (*c*) Describe (with equations) the preparation of formic acid.

9. Describe the methods of determining molecular weights by the influence of dissolved substances on the properties of the solvent, and show that these modifications of the properties of the solvent are due to the same source as that of osmotic pressure.

Scholarship.

10. The osmotic pressure of a one per cent. solution of cane sugar at 10° *C* was found by experiment to be equal to 535 millimetres of mercury. Show that this is very close to the gaseous pressure which the sugar would exert if it could exist as a gas.

FACULTY OF ARTS AND PRACTICAL SCIENCE.

PASS.

Elementary Mineralogy and Blowpipe Analysis.

1. Name the forms present on the crystals lettered *k*, *x*, and *o*.

2. Give the crystal habit of the following minerals:—quartz, apatite, biotite, chalcopyrite, arsenopyrite, fluorite.

3. Describe in detail the following mineral species:—scapolite, tourmaline, titanite.

4. Give the composition of the following mineral species:—augite, actinolite, talc, ankerite.

5. Characterise the following mineral groups:—(*a*) the feldspars, (*b*) the garnets, (*c*) the zeolites.

6. Determine by field tests the hand specimens labelled *a*, *b*, *c*, *d*.

7. Mention the (*a*) easily fusible sulphides, (*b*) infusible sulphides, (*c*) substances that impart blue colour to borax bead.

8. Distinguish by the blowpipe (*a*) pyrolusite and graphite, (*b*) niccolite and millerite, (*c*) magnetite and ilmenite.

9. A mixture of acid sulphate of potash and fluor spar is used in blowpipe analysis. Explain (*a*) for what purpose this is used, and (*b*) the chemical action involved.

10. Give one *characteristic* blowpipe test for the following:—tin, zinc, lead, aluminum, selenium.

11. Give the pyrognostic characters of the following minerals:—molybdenite, bornite, siderite.

12. Determine by the blowpipe the numbered specimens.

FACULTIES OF ARTS AND PRACTICAL SCIENCE.

PASS.

Geology.

1. Name plutonic rocks in which each of the following minerals occurs as an essential constituent:—Olivine, augite, albite, nepheline, muscovite. What accessory minerals are commonly found in diabase?

2. Give a list of ores of igneous origin.

3. In what different ways may limestones be formed?

4. Draw up a list of materials used for refractory purposes.

5. Explain the following terms, by means of diagrams:—Reversed fault, hade, unconformity, segregated vein, strike joint.

6. Name characteristic Palæozoic representatives of the followiug:—Hydrozoa, crustacea, cephalopoda, vertebrata.

7. Write notes on the climate and the life of the Mesozoic. Give an account of the distribution of rocks of this age in Canada.

8. What important geological discovery was made by William Smith?

9. "Geologists found that one key to the past was to be found in the study of the forces which may be observed in actual operation at the present time." Explain and illustrate this statement.

10. Name the specimens labelled A, B, C, D, E, F, respectively.

Arts

HONOUR PAPERS.

PRELIMINARY HONOURS.

Latin.

Roman History.

1. Criticise Livy's account of the kings of Rome.

2. State the grounds of contention between the Patricians and Plebeians in early Rome, and analyse the results of the struggle as they affect the plebs, the Senate, and the Magistrates.

3. Sketch briefly the career of Marius.

4. Explain the state of parties in Rome on the eve of Pompey's return from the East.

5. Would you call the Roman provincial government good or bad? Give reasons for your view.

PRELIMINARY AND FINAL HONOURS.

Latin.

A.

(1 and 2 unseen; 3 and 4 set books.)

Translate into English:

1. Nam uti dudum hinc abii, accessi ad adulescentis in foro: "Salvete" inquam: "quo imus una ad prandium?" atque illi tacent.
"Quis ait 'hoc' aut quis profitetur?" inquam: quasi muti silent, Neque me rident. "ubi cenamus [hodie]?" inquam atque illi abnuont.
Dico unum ridiculum dictum de dictis melioribus,
Quibus solebam menstrualis epulas ante apiscier:
Nemo ridet. scivi extemplo rem de conpecto geri.
Ne canem quidem inritatam voluit quisquam imitarier,
Saltem, si non arriderent, dentis ut restringerent.
Abeo ab illis, postquam video me sic ludificarier.
Pergo ad alios, venio ad alios, deinde ad alios: una rest.
Omnes de conpecto rem agunt, quasi in Velabro olearii.
Item alii parasiti frustra obambulabant in foro.
Nunc barbarica lege certumst ius meum omne persequi.
Consilium qui iniere, quo nos victu et vita prohibeant,
Is diem dicam, inrogabo multam, ut mihi cenas decem
Meo arbitratu dent, quom cara annona sit. sic egero.

PLAUTUS *Captivi* 478-495.

2. Ego vero, Servi, vellem, ut scribis, in meo gravissimo casu adfuisses. Quantum enim praesens me adiuvare potueris et consolando et prope aeque dolendo facile ex eo intellego, quod litteris lectis aliquantum acquievi. Nam et ea scripsisti, quae levare luctum possent, et in me consolando non mediocrem ipse animi dolorem adhibuisti. Servius tamen tuus omnibus officiis quae illi tempori tribui potuerunt, declaravit et quanti ipse me faceret et quam suum talem erga me animum tibi gratum putaret fore: cuius officia iucundiora scilicet saepe mihi fuerunt, numquam tamen gratiora. Me autem non oratio tua solum et societas paene aegritudinis, sed etiam auctoritas consolatur. Turpe enim esse existimo me non ita ferre casum meum, ut tu, tali sapientia praeditus, ferendum putas. Sed opprimor interdum et vix resisto dolori, quod ea me solacia deficiunt, quae ceteris, quorum mihi exempla propono, simili in fortuna non defuerunt. Nam et Q.

Maximus, qui filium consularem, clarum virum et magnis rebus gestis, amisit, et L. Paullus, qui duo septem diebus, et vester Gallus et M. Cato, qui summo ingenio, summa virtute filium perdidit, iis temporibus fuerunt, ut eorum luctum ipsorum dignitas consolaretur ea, quam ex re publica consequebantur.

CICERO (*Letters* 61) *ad Fam.* iv 5.

3. Suffenus iste, Vare, quem probe nosti,
Homo est venustus et dicax et urbanus,
Idemque longe plurimos facit versus.
Puto esse ego illi millia aut decem aut plura
Perscripta: nec sic, ut fit, in palimpsesto
Relata: chartae regiae, novi libri,
Novi umbilici, lora rubra, membrana
Directa plumbo, et pumice omnia aequata.
Haec cum legas, tum bellus ille et urbanus
Suffenus unus caprimulgus aut fossor
Rursus videtur: tantum abhorret ac mutat.
Hoc quid putemus esse? Qui modo scurra,
Aut si quid hac re tritius, videbatur,
Idem inficeto est inficetior rure,
Simul poemata attigit. Neque idem unquam
Aeque est beatus, ac poema cum scribit:
Tam gaudet in se, tamque se ipse miratur.
Nimirum idem omnes fallimur; neque est quisquam,
Quem non in aliqua re videre Suffenum
Possis. Suus quoique attributus est error:
Sed non videmus, manticae quid in tergo est.

CATULLUS xxii.

4. Cum diversam partem provinciae circumirem, Nicomediae vastissimum incendium multas privatorum domos et duo publica opera quamquam via interiacente, Gerusiam et Iseon, absumsit. Est autem latius sparsum primum violentia venti, deinde inertia hominum, quos satis constat otiosos et inmobiles tanti mali spectatores perstitisse; et alioqui nullus usquam in publico sipho, nulla hama, nullum denique instrumentum ad incendia conpescenda. Et haec quidem, ut iam praecepi, parabuntur. Tu, domine, dispice an instituendum putes collegium fabrorum dumtaxat hominum CL. Ego attendam ne quis nisi faber recipiatur neve iure concesso in aliud utatur; nec erit difficile custodire tam paucos.

PLINY x 33.

Comment on this, and give the substance of Trajan's answer.

5. Mention some of the chief characteristics of Catullus.

PRELIMINARY AND FINAL HONOURS.

Latin.

B.

(1 and 2 unseen: 3 and 4 set books.)

Translate into English:

1. "Iam iam non domus accipiet te laeta, neque uxor
Optima nec dulces occurrent oscula nati
Praeripere et tacita pectus dulcedine tangent.
Non poteris factis florentibus esse, tuisque
Praesidium. misero misere" aiunt "omnia ademit
Una dies infesta tibi tot praemia vitae."
Illud in his rebus non addunt "nec tibi earum
Iam desiderium rerum super insidet una."
Quod bene si videant animo dictisque sequantur,
Dissoluant animi magno se angore metuque.
"Tu quidem ut es leto sopitus, sic eris aevi
Quod superest cunctis privatu' doloribus aegris.
At nos horrifico cinefactum te prope busto
Insatiabiliter deflevimus, aeternumque
Nulla dies nobis maerorem e pectore demet."
Illud ab hoc igitur quaerendum est, quid sit amari
Tanto opere, ad somnum si res redit atque quietem,
Cur quisquam aeterno possit tabescere luctu.

LUCRETIUS iii 894-911.

2. Non est, mi Lucili, quod amicum tantum in foro et in curia quaeras: si diligenter adtenderis, et domi invenies. saepe bona materia cessat sine artifice: tempta et experiere. Quemadmodum stultus est, qui equum empturus non ipsum inspicit, sed stratum eius ac frenos: sic stultissimus est, qui hominem aut ex veste aut ex condicione, quae vestis modo nobis circumdata est, aestimat. "Servus est." sed fortasse liber animo. "servus est." hoc illi nocebit? ostende, quis non sit: alius libidini servit, alius avaritiae, alius ambitioni, omnes timori. dabo consularem aniculae servientem, dabo ancillulae divitem, ostendam nobilissimos iuvenes mancipia pantomimorum: nulla servitus turpior est quam voluntaria. Quare non est, quod fastidiosi isti te deterreant, quo minus servis tuis hilarem te praestes et non superbe superiorem: colant potius te quam timeant. Dicet aliquis nunc me vocare ad pileum servos et dominos de fastigio suo deicere, quod dixi: colant potius dominum quam timeant: "ita, inquit, prorsus, colant tamquam

clientes, tamquam salutatores?'' Hoc qui dixerit, obliviscetur id dominis parum non esse, quod deo sat est. qui colitur et amatur: non potest amor cum timore misceri.

SENECA *Epp.* 47, 16-10.

3. Frater erat Romae consulti rhetor, ut alter
Alterius sermone meros audiret honores,
Gracchus ut hic illi, foret huic ut Mucius ille.
Qui minus argutos vexat furor iste poetas ?
Carmina compono, hic elegos. ''Mirabile visu
Caelatumque novem Musis opus !'' Adspice primum
Quanto cum fastu, quanto molimine circum
Spectemus vacuam Romanis vatibus aedem !
Mox etiam, si forte vacas, sequere et procul audi,
Quid ferat et quare sibi nectat uterque coronam.
Caedimur et totidem plagis consumimus hostem
Lento Samnites ad lumina prima duello.
Discedo Alcaeus puncto illius; ille meo quis ?
Quis nisi Callimachus ? Si plus adposcere visus,
Fit Mimnermus et optivo cognomine crescit.
Multa fero ut placem genus irritabile vatum,
Cum scribo et supplex populi suffragia capto;
Idem, finitis studiis et mente recepta,
Obturem patulas impune legentibus aures.

HORACE *Epp.* ii 2, 87-105.

4. Sensit vetus regnandi, falsos in amore odia non fingere. Nec ultra moratus, quam dum Scytharum auxilia conciret, pergit properus et praeveniens inimicorum astus, amicorum poenitentiam : neque exuerat paedorem, ut vulgum miseratione adverteret. Non fraus, non preces, nihil omissum, quo ambiguos inliceret, prompti firmarentur. Iamque multa manu propinqua Seleuciae adventabat; cum Tiridates, simul fama, atque ipso Artabano perculsus, distrahi consiliis, iret contra, an bellum cunctatione tractaret. Quibus proelium et festinati casus placebant, disiectos et longinquitate itineris fessos, ne animo quidem satis ad obsequium coaluisse, disserunt, proditores nuper hostesque eius, quem rursum foveant. Verum Abdageses, regrediendum in Mesopotamiam, censebat, ut amne obiecto, Armeniis interim Elymaeisque et ceteris a tergo excitis, aucti copiis socialibus, et quas dux Romanus mississet, fortunas tentarent. Ea sententia valuit, quia plurima auctoritas penes Abdagesen, et Tiridates ignavus ad pericula erat. Sed fugae specie discessum: ac, principio a gente Arabum facto, ceteri domos abeunt, vel in castra Artabani: donec Tiridates, cum paucis in Syriam revectus, pudore proditionis omnes exsolvit.

TACITUS *Annals* vi 44.

FINAL HONOURS.

Latin.

C.

(1 and 2 unseen: 3 and 4 set books.)

Translate into English:

1. Sigeasque petit famae mirator harenas,
Et Simoentis aquas, et Graio nobile busto
Rhoetion, et multum debentis vatibus umbras.
Circuit exustae nomen memorabile Troiae,
Magnaque Phoebei quaerit vestigia muri.
Iam siluae steriles et putres robore trunci
Assaraci pressere domos, et templa deorum
Iam lassa radice tenent, ac tota teguntur
Pergama dumetis; etiam periere ruinae.
Adspicit Hesiones scopulos, silvasque latentis
Anchisae thalamos; quo iudex sederit antro:
Unde puer raptus coelo: quo vertice Nais
Luserit Oenone: nullum est sine nomine saxum.
O sacer et magnus vatum labor, omnia fato
Eripis et populis donas mortalibus aevom.
Invidia sacrae, Caesar, ne tangere famae:
Nam si quid Latiis fas est promittere Musis,
Quantum Zmyrnaei durabunt vatis honores,
Venturi me teque legent: Pharsalia nostra
Vivet et a nullo tenebris damnabimur aevo.

LUCAN ix 961-973; 980-986.

Explain the situation.

2. Neque enim te fugit omnium laudatarum artium procreatricem quamdam et quasi parentem eam, quam φιλοσοίαν Graeci vocant, ab hominibus doctissimis iudicari; in qua difficile est enumerare quot viri quanta scientia quantaque in suis studiis varietate et copia fuerint, qui non una aliqua in re separatim elaborarint, sed omnia, quaecumque possent, vel scientiae pervestigatione vel disserendi ratione comprehenderint. Quis ignorat, ii, qui mathematici vocantur, quanta in obscuritate rerum et quam recondita in arte et multiplici subtilique versentur? Quo tamen in genere ita multi perfecti homines exstiterunt, ut nemo fere studuisse ei scientiae vehementius videatur, quin quod voluerit consecutus sit. Quis musicis, quis huic studio litterarum, quod profitentur ii, qui grammatici vocantur, penitus se dedit,

quin omnem illarum artium paene infinitam vim et materiem scientia et cognitione comprehenderit? Vere mihi hoc videor esse dicturus, ex omnibus iis, qui in harum artium liberalissimis studiis sint doctrinisque versati, minimam copiam poetarum egregiorum exstitisse.

CICERO *de or.* i 3, 9-11.

3. Ad populum phaleras! ego te intus et in cute novi.
Non pudet ad morem discincti vivere Nattae?
Sed stupet hic vitio et fibris increvit opimum
Pingue, caret culpa, nescit quid perdat, et alto
Demersus summa rursum non bullit in unda.
Magne pater divum, saevos punire tyrannos
Haud alia ratione velis, cum dira libido
Moverit ingenium ferventi tincta veneno:
Virtutem videant intabescantque relicta.
Anne magis Siculi gemuerunt aera iuvenci,
Et magis auratis pendens laquearibus ensis
Purpureas subter cervices terruit, "imus,
Imus praecipites" quam si sibi dicat et intus
Palleat infelix, quod proxima nesciat uxor?

PERSIUS iii 30-43.

4. Verum antequam de singulis loquar, pauca in universum de varietate opinionum dicenda sunt. Nam quidam solos veteres legendos putant neque in ullis aliis esse naturalem eloquentiam et robur viris dignum arbitrantur; alios recens haec lascivia deliciaeque et omnia ad voluptatem multitudinis imperitae composita delectant. Ipsorum etiam qui rectum dicendi genus sequi volunt alii pressa demum et tenuia et quae minimum ab usu cotidiano recedant, sana et vere Attica putant; quosdam elatior ingenii vis et magis concitata et plena spiritus capit; sunt etiam lenis et nitidi et compositi generis non pauci amatores. De qua differentia disseram diligentius, cum de genere dicendi quaerendum erit. Interim summatim, quid et a qua lectione petere possint, qui confirmare facultatem dicendi volent, attingam. Paucos enim (sunt eminentissimi) excerpere in animo est. Facile est autem studiosis, qui sint his simillimi, iudicare; ne quisquam queratur, omissos forte, quos ipse valde probet. Fateor enim plures legendos esse quam qui a me nominabuntur.

Sed nunc genera ipsa lectionum, quae praecipue convenire intendentibus, ut oratores fiant, existimem, persequor.

QUINTILIAN x 1, 42-45.

5. Mention the main points in which the Alexandrine poets affected Roman literature.

PRELIMINARY AND FINAL HONOURS.

Latin.

(Either but not both pieces may be attempted by Preliminary Candidates.)

For Latin Prose.

1. It is, then, abundantly manifest from every source of evidence that war was forced on the English ministry; that Pitt carried to an extreme his anxiety to avoid it; that his resignation could not have averted it; and that in any case it was impossible for him as a man of honour, or a serious statesman, to resign. We shall see, when war had begun, his constant endeavours to put an end to it. Whether he was a great war minister, as he is generally considered, or an incapable war minister, as he is called by Macaulay, he is certainly the most strenuous peace minister that ever held office in this country.

LORD ROSEBERY *Pitt* c. vii.

2. Virgil belongs to that small class of poets who have been altogether fortunate. Admired not only for his rare genius, but also for his rare character, which made him one of the most sympathetic men of his age, he was spoken of with enthusiasm by all his fellow-poets, the best of whom were ready, as we learn from their works, freely to acknowledge his superiority. He had enemies —genius always has—but he could well afford to forget them in the esteem with which he was regarded by great men of every kind and by the whole Roman people, which, on hearing his verses recited in the theatre, rose as one man and saluted the poet, who happened to be present, with the acclamations usually reserved for Augustus.

COMPARETTI *Virgil in the Middle Ages* c. iii.

PRELIMINARY HONOURS.

Greek.

1. Translate with short notes :—

Aristophanes, Birds, 1277–1307.
1470–1493.
Homer Odyssey XVI. 190– 212.
XVIII. 88– 107.

2. Show the relation in which the "Birds" stand to the political circumstances of the time. What is Aristophanes' main purpose in this play?

3. Sketch the characters of Eumaeus and Melanthius.

PRELIMINARY HONOURS.

Greek.

1. Translate with short notes :—

Sophocles Antigone, 966– 987.
249– 277.
Euripides Orestes, 421– 440.
1395–1424.

2. In what sense is Antigone a "sinless criminal"?

3. Point out any peculiarities in Euripides' treatment of the story of Orestes.

PRELIMINARY HONOURS.

Greek.

1. Translate with short notes:—

   Thucydides VII., 30.

   Plutarch, Solon, 22.

2. Give an account of the mutilation of the Hermae.
3. Describe the character and policy of Pericles.
4. Sketch the life-work of Solon.
5. Discuss Nikias' conduct of the operations in Sicily.

PRELIMINARY HONOURS.

Greek.

Translate Thucydides VIII., 107.

Sophocles Philoctetes, 232–253.

2. Make into Greek :—

Greek usages in warfare were sufficiently cruel, but the atrocities of the Thracians were of a still deeper dye. A force of these Thracians, who were to have sailed with Demosthenes for Sicily, had arrived too late, and were sent home again by the Athenians, who in their present pecuniary embarrassments did not wish to incur the expense of maintaining them. Diitrephes, who was charged to conduct them home, had orders to utilize them for the purpose of inflicting as much damage as he could on Boeotia in passing. He marched accordingly on Mycalessus, which they completely surprised and had entirely at their mercy. The scene which followed was the most tragic and bloody of the whole war. Neither age nor sex was spared. Every living thing was remorselessly hewed down. Among other horrors, a children's school was attacked in the early morning, just after the pupils had assembled, and every one in the place was butchered. In proportion to its size, no Greek city had ever suffered such a terrible calamity as Mycalessus.

FINAL HONOURS.

Greek.

General Paper.

1. Show the causes which led to the formation and the fall of the Athenian Empire.

2. How does Plutarch supplement the account of Pericles given by Thucydides.

3. Sketch the plan of the Odyssey as a whole, and show its unity as a work of art. What seems to you the main elements in its charm?

4. In what way did the external arrangement of the Greek Theatre limit the Athenian dramatic art?

5. What evidence is derivable from the "Frogs" of Aristophanes as to the light in which the Athenians regarded the functions of their tragic poets?

6. Discuss the Zeus of the "Prometheus Bound."

7. Compare Aeschylus and Euripides in their treatment of the Orestes Myth.

8. Expound and illustrate by quotations the ethical conflict in the Antigone.

9. Describe the conditions which fostered the poetical activity of Pindar. Illustrate his attitude to the traditional mythology.

10. Characterize the oratory of Demosthenes and compare him with Cicero.

FINAL HONOURS.

Greek.

1. Translate :—Plutarch, Themistocles, XV.

2. Make into Greek :—To Plato the science of medicine appeared one of very disputable advantage. He did not indeed object to quick cures for acute disorders, or for injuries produced by accidents. But the art which resists the slow sap of chronic disease, which repairs frames enervated by lust, swollen by gluttony or inflamed by wine, which encourages sensuality by mitigating the punishment of the sensualist, and prolongs existence when the intellect has ceased to retain its entire energy, had no share of his esteem. A life protracted by medical skill, he pronounced to be a long death. The exercise of the art of medicine ought, he said, to be tolerated so far as that may serve to cure the occasional distempers of men whose constitutions are good. As to those who have bad constitutions, let them die ; and the sooner the better. Such men are unfit for war, for magistracy, for the management of their domestic affairs. That, however, is comparatively of little consequence. But they are incapable of study and speculation. If they engage in any severe mental exercises, they are troubled with giddiness ; all which they lay to the account of philosophy. The best thing which can happen to such wretches is to have done with life at once.

MACAULAY.

FINAL HONOURS.

Greek.

Translate with short notes:

Homer, Odyssey, XXI.	288– 310.
Pindar, Olymp, VI.	36– 57.
Aristophanes, Clouds	999–1513.
Frogs	744– 763.
Theocritus, Id., VII.	52– 65.

FINAL HONOURS.

Greek.

Translate with short notes:—

Plato, Republic, II. Chap. XVIII.
III. Chap. XV.–D.
Aristotle, Ethics, Chap. II.–5.
X.–5.

1. In the Republic what parts do Thrasymachus, and Glaukon, and Adeimantus play in the discussion?

2. Sketch the psychology of Plato as developed in the Republic.

3. What, according to Aristotle, are the First Principles of Ethics?

4, Discuss the Aristotelian doctrine of matter and form, and show its bearing on the method of Ethics.

5. Discuss Aristotle's final court of appeal in Ethics and Aesthetics.

6. What is the relation in Ethics between Theory and Practice?

FINAL HONOURS.

Greek.

Translate with short notes:

Aeschylus, Prom. Vinct.	1040–1053.
Agam.	975–1000.
Sophocles, Oed. Rex.	707– 725.
Antig.	781– 805.
Euripides, Medea.	410– 445.

FINAL HONOURS.

Greek.

Translate with short notes :—

Herodotus, IX. 70.
Thucydides, IV. 60.
VII. 68.
Demosthenes, De Corona, 194.
Plutarch, Pericles, XXXIV. 8–end.

PRELIMINARY AND FINAL HONOURS.

French.

(*a*) *Le diable soit de la peau d'âne!* Je l'avais oubliée. Mais enfin, quel est donc le sauvage qui vient saluer l'aurore *au fond* des bois avec un tambour? . . . *J'ai beau regarder*, je ne vois rien . . . rien que les *touffes* de lavande, et les pins qui *dégringolent* jusqu'en bas sur la route . . . Il y a peut-être par-là dans le *fourré* quelque *lutin* caché *en train de* se moquer *de* moi . . C'est Ariel, sans doute, ou maître Puck. Le drôle se sera dit, en passant devant mon moulin:

—Ce Parisien est trop tranquille là-dedans, allons lui *donner l'aubade.*

(*b*)—Je n'ai pas faim, je suis toute *malingre*, tu le sais bien. —Ah! ouin! Tu peux te *bourrer* sans crainte de *faire crever* ton *coffre;* tu es une la Bertellière, une femme solide. Tu es bien un *petit brin jaunette*, mais j'aime le jaune.

(*c*) Le voilà revenu!
Vous souvient-il, marquis? oh! quel enfant *prodigue!*
Comme il vous répandait les pistoles *sans digue!*
Tous les soirs danse et fête *au vivier* d'Apollo,
Et cent musiciens *faisant rage* sur l'eau!

(*d*) *Bagatelles ici.* Je te défie d'attendrir, du côté de l'argent, l'homme *dont il est question.* Il est *Turc* là-dessus, mais d'une *turquerie à* désespérer tout le monde; et l'on pourroit *crever, qu'il ne branlerait pas.*

(*e*) Il n'était ambre, il n'etait fleur
Qui ne fût *aïl au prix.* Sa sotte flatterie
Eut un mauvais succès, et fut *encor* punie:
Ce monseigneur du lion-là
Fut *parent de Caligula.*
Le renard étant proche: *Or ça*, lui dit le sire,
Que sens-tu? dis-le-moi: parle *sans déguiser.*
L'autre aussitôt *de s'excuser*,
Alléguant un grand rhume: il ne pouvait *que* dire
Sans odorat. Bref, *il s'en tire.*

(*f*) Depuis toute la matinée,
Je patauge à travers vos toiles d'araignée.
Aucun de vos projets ne doit être *debout.*
Je *m'y vautre au hasard.* Je vous *démolis* tout.
C'est très *réjouissant.*

1. Refer each of the above extracts to its context, show-

ing its connection with the plot of the work from which it is taken; and explain in idiomatic French all italicized words and phrases.

2. Explain in idiomatic French:

Il a des nostalgies.—Il est là . . . son tambour entre ses jambes, et s'en donnant à cœur joie.—tape à tour de bras.—Elle pensa qu'elle ne pouvait plus se faire à cette vie.—Sur ses genoux repose une grande serviette en chagrin gaufré.—Buvez ceci . . . vous m'en direz des nouvelles.—Il vient comme marée en carême.—Allons, Nanon, haut le pied.—Ne faut-il pas se connaître aux comptes de retour, débours.—Il y a des anguilles sous roche.—Motus.—Les lois de police défendent le tapage nocturne.—Va, bon train, Cornoiller.—Emboisez-moi ces gens-là.—Un capitaine au long cours.—qui riait dans sa barbe.—J'ai guigné ceci tout le jour.—Il sait ce que c'est que de vivre.

3. Turn into idiomatic French:

Which is the way to Arles?—As far as the eye can reach there is nothing to be seen but marshes and reeds.—He burst out laughing.—He had been living there for sixty years.—In the long run everything was found out.—By merely looking at the stars, I know that it is past midnight.—He wished to dance with his mother.—Ah! caught, rogue! I have kept it for you for seven years.—What it was about was explained to him with great difficulty.—My flesh creeps at the very thought of it.—The family comes there on Sundays to pay a visit to their dead.—And so, for that reason custom (customers) is coming her way.—Take care not to run against the candle-stick.—The notary did not think it was becoming a president of the court to go to Paris.—A nobler motive has inspired me with this resolution.

B.

1. "C'est la tradition classique, celle de tous les chefs-d'œuvre que l'action doit être une, claire, simple, rapide et vraisemblable." Show how far this is applicable to the *L'Avare*, *Mérope*, *Ruy Blas*, and *Eugénie Grandet*.

2. "L'Apologue de La Fontaine tient à l'épopée, au genre descriptif, au drame et à la poésie gnomique." Explain, mentioning, with reasons, fables which may be referred to each *genre*.

3. "Il ne faut pas vendre la peau de l'ours avant de

l'avoir tué." "Contentement passe richesse." Discuss briefly the above maxims. Name fables illustrating them and give a *résumé* of any one of these fables (answer in French).

4. How would you classify the *Lettres de mon Moulin*? Give the grounds of your classification.

C.

1. What does Petit de Julleville understand by *un écrivain classique?* Name the authors of the seventeenth century who, according to him, are worthy of this title, stating the kind of literature to which their work belongs.

2. What are the distinguishing features of the literary periods of the eighteenth century?

3. Give a brief account of the life and works of Honoré de Balzac, noting particularly any biographical reflections in *Eugénie Grandet.* Trace briefly the school of which Balzac is the founder.

4. Name the great French historians, with their works, of the nineteenth century.

5. Notes on Ronsard, Regnard, Beaumarchais, Feuillet.

FIRST YEAR AND FINAL HONOURS.

French.

(NOTE.—First Year Candidates will omit B.)

A.

Translate into French:

1. This is the second evening that I have passed in this miserable room, looking with a sad eye at my empty fireplace. listening stupidly to the monotonous sounds of the street, and feeling in the great city more solitary and abandoned than the shipwrecked sailor, shivering on his broken plank in mid-ocean. But enough of cowardice! I will face my fate and thus deprive it of its spectre-like appearance. I also wish to open my heart, which is overflowing with vexation, to the only confidant whose pity cannot offend me—that last pale friend who looks at me from my mirror.

2. Yann never came home. One August night, out there, off the coast of gloomy Iceland, in the midst of a great fury of sound, were celebrated his nuptials with the sea—with the sea who of old had also been his nurse. She had made him a strong and broad-chested youth, and then had taken him in his magnificent manhood for herself alone.

A deep mystery had enveloped their monstrous nuptials. Dusky veils all the while had been shaken above them, curtains inflated and twisted, stretched there to hide the feast; and the bride gave voice continually, made her loudest and most horrible noise to smother the cries. He, remembering Gaud, his wife of flesh, had defended himself, struggling like a giant, against this spouse that was the grave, until the moment when he let himself go, his arms open to receive her, with a great deep cry, like the death-roar of a bull, his mouth already full of water, his arms open, stretched and stiff for ever. And they were all at his wedding—all those whom he had bidden of old, all except Sylvestre, who, poor fellow, had gone off to sleep in enchanted gardens far away on the other side of the earth.

B.

Translate into French:

We should be quarrelling, abusing, avoiding one another. Our houses would become caverns, and we should go in rags because we cared for nobody. Rents would go down, parties wouldn't

be given any more. All the tradesmen of the town would be bankrupt. Wine, wax-lights, comestibles, diamonds, wigs, old china, and splendid high-stepping carriage horses—all the delights of life, I say, would go to the deuce, if people did but act upon their silly principles and avoid those whom they dislike and abuse. Whereas by a little charity and mutual forbearance things are made to go on pleasantly enough; we may abuse a man as much as we like, and call him the greatest rascal unhung—but do we wish to hang him therefore? No; we shake hands with him when we meet. If his cook is good we forgive him, and go and dine with him; and we expect he will do the same by us.

C.

Subject for French Composition :

1. "Travaillez prenez de la peine :
C'est le fonds qui manque le moins."

or

2. "En Camargue" (*Daudet*).

or

3. "Merope" (*Voltaire*).

FIRST YEAR AND FINAL HONOURS.

French.

NOTE.—First year Candidates will omit B.

A.

Translate:

1. Sur la doctrine, je serai bref. Bien petit est en effet le nombre de ceux qui contestent aujourd'hui sinon l'obligation, du moins la nécessité sociale de venir en aide à ceux qui souffrent. Peu s'en est fallu cependant, il y a quelques années, que, sous l'influence de l'engouement peut-être passager pour la doctrine de l'évolution et du transformisme qui s'est emparé de tous les esprits, et à force de répéter des mots devenus sacramentals: *selection naturelle, lutte pour la vie,* cette opinion barbare ne finît par triompher, que l'écrasement des faibles était la condition du progrès, aussi bien pour l'espèce humaine que pour l'espèce animale, et que toute assistance prêtée aux faibles ne faisait que le retarder. Cette doctrine a été formulée par Herbert Spencer dans une phrase célèbre: "La pauvreté des incapables, la détresse des imprudens, l'élimination des paresseux et *cette poussée des forts qui met de côté les faibles* sont le résultat général d'une loi éclairée et bienfaisante;" et dans cette autre: "Si la multiplication des moins bien doués était favorisée, et celle des mieux doués entravée, une dégradation progressive de l'espèce s'ensuivrait, et cette espèce dégénérée céderait la place aux espèces avec qui elle se trouverait en compétition." Revue des Deux Mondes.

2. Il y a aujourd'hui trois cent quarante-huit ans six mois et dix-neuf jours que les Parisiens s'éveillèrent au bruit de toutes les cloches sonnant à grande volée dans la triple enceinte de la Cité, de l'Université et de la Ville.

Ce n'est cependant pas un jour dont l'histoire ait gardé souvenr que le 6 janvier 1482. Rien de notable dans l'événement qui mettait ainsi en branle, dès le matin, les cloches et les bourgeois de Paris. Ce n'était ni un assaut de Picards ou de Bourguignons, ni une châsse menée en procession, ni une révolte d'écoliers dans la ville de Laas, ni une entrée de *notredit très redouté seigneur monsieur le roi,* ni même une belle pendaison de larrons et de larronnesses à la Justice de Paris. Ce n'était pas non plus la survenue, si fréquente au quinzième siècle, de quelque ambassade chamarrée et empanachée. Victor Hugo.

B.

Translate into Modern French :

Il fut uns bons hom de religion qui proia Dieu sovent en ses oroisons qu'il li donast vëoir et demostrast alcune chose de la grant dolçor et de la belté et de la joie qu'il estuie et promet a cels qui lui aiment. Et Diex nostre sire l'en oït, car, si com il fut assis une fois a une ainsjornée tot sols en l'encloistre de l'abbaïe, si li envoia Damnediex un angle en semblance d'un oisel qui s'asist devant lui. Et com il esguarda cel angle, de qui il ne savoit pas que ce fut angles, ainz cuidoit que ce fust uns oisels, si ficha son esgart en la belté de lui tant durement qu'il oblia tot quanqu'il avoit veü ça en ariéres. Maurice de Sully.

FIRST YEAR AND FINAL HONOURS.

French.

Dictation.

Les déserts d'Afrique occupent un espacc deux ou trois fois aussi grand que la Méditerranée; mais autan cette mer a contribué à hâter la civilisation de l'Europe, autant le grand désert de Sahara a prolongé la barbarie des peuples qu'il isole du monde civilisé. Les vents, en parcourant une si vaste étendue de sable qu'échauffent les rayons d'un soleil brûlant, parce que ces rayons tombent verticalement, perdent leur fraîcheur, leur humidité, et deviennent à la fin aussi brûlants que les vapeurs enflammées qui s'élèvent de ce sol embrasé. Nous savons, par ce qu'ont rapporté les explorateurs, que de légers troupeaux d'autruches et de gazelles, des hordes altérées de lions et de panthères remplissent cet espace immense de leurs combats inégaux. Quelques îles sont fréquentées par des essaims nomades parce qu'elles sont verdoyantes et bien arrosées. Le reste du désert de l'Afrique ne saurait, quoi qu'on dise, être considéré comme habitable. Les peuples civilisés qui l'avoisinent ne se hasardent à y pénétrer qu'à certaines époques périodiques. C'est en suivant des routes fixées depuis des milliers d'années d'une manière invariable par les relations du commerce, que la longue caravane marche de Tafilet à Tombouctou, ou du Fezzan au Darfour ; entreprises hardies dont la possibilité repose, quoi qu'on fasse, uniquement sur l'existence du chamean, appelé si justement le Navire du désert.

FINAL HONOURS.

French.

A.

(*a*) Je vous aime,
Beaucoup moins que mon Dieu, mais bien plus que moi-même.

(*b*) Puissant maître des cieux,
Remets-lui le bandeau dont tu couvris ses yeux
Lorsque, lui dérobant tout le fruit de son crime,
Tu cachas dans mon sein cette tendre victime.

(*c*) Non, vous avez beau faire et beau me raisonner:
Rien, de ce que je dis, ne me peut détourner:
Trop de perversité règne au siècle où nous sommes,
Et je veux me tirer du commerce des hommes.

(*d*) Madame, ce m'est une gloire bien grande, de me voir assez fortuné, pour être si heureux, que d'avoir le bonheur, que vous ayez eu la bonté de m'accorder la grâce, de me faire l'honneur de m'honorer de la faveur de votre présence.

(*e*) Ce n'est pas tout; ô ciel! suis-je assez humiliée! . . . Apprenez que dans peu le perfide ose entrer par cette jalousie, dont ils ont eu l'art de vous dérober la clef.

(*f*) Vers l'Orient au fond de la perspective, le soleil commençait à paraitre entre les sommets brisés des Apalaches, qui se dessinaient comme des caractères d'azur dans les hauteurs dorées du ciel; à l'occident, le Meschacebé roulait ses ondes dans un silence magnifique et formait la bordure du tableau avec une inconcevable grandeur.

(*g*) Dehors se devait être la mer et la nuit, l'infime désolation des eaux noires et profondes. La fraîcheur humide de l'air était plus intense, plus pénétrante, que du vrai froid, et, en respirant, on sentait très fort le goût de sel. Tout était calme et il ne pleuvait plus; en haut, des nuages informes et incolores semblaient contenir cette lumiére latente qui ne s'expliquait pas:

(*h*) "Monsieur," dit le voyageur, "pardon! En payant, pourriez-vous me donner une assiettée de soupe et un coin pour dormir dans ce hangar qui est là dans le jardin? Dites, pourriez-vous? en payant?"

"Qui êtes-vous?" demanda le maître du logis.

L'homme répondit:—"J'arrive du Puy Moisson. J'ai marché

toute la journée. J'ai fait douze lieues. Pourriez-vous? En payant?" "Je ne refuserais pas, dit le paysan, de loger quelqu'un de bien qui payerait. Mais pourquoi n'allez vous pas à l'auberge?"

1. Give the context of each extract and its connection with the plot of the work from which it is taken; and rewrite (*d*) so as to express its meaning in ordinary French prose.

B.

1. Discuss Corneille's and Racine's plays read, with special reference to historic truth.

2. De toutes les scènes auxquelles il (La Fontaine) a assisté, scènes tantôt sublimes et imposantes, tantôt odieuses, ridicules, révoltantes, parfois gracieuses, douces, une vérité s'est dégagée: . .

Mention fables to which the above *scènes* refer, giving your reasons; and state *la vérité qui s'est dégagée.*

3. Give About's Theory of Education, and state how far it has been carried out.

4. Compare authors of (*f*) and (*g*) as to power and style in description of nature.

5. Complete in French the scene in (*h*), and discuss the author's treatment of the social question.

6. Explain the symbolic meaning of the characters Jean and Maurice; and state briefly your opinion of the author as a writer and a moralist.

C.

1. Give an account of the "Pléiade," and state its influence on French literature.

2. Give a sketch of French comedy from the sixteenth century (inclusive) up to the Revolution.

3. Compare the literature of France in the eighteenth century with that of Germany during the same period; and mention any influence exercised by either one on the other.

FINAL HONOURS.

French.

A.

1. A halte voiz prist li pédre a crider:
"Filz Alexis, quels duels m'est presentez!
Malvaise guarde t'ai fait soz mon degrét.
A! las, pechables, com par fui avoglez!
Tant l'ai vedut, si nel pöi aviser!

"Filz Alexis, de ta dolente médre!
Tantes dolors at por tei endurédes,
E tantes fains e tantes seiz passédes,
E tantes lairmes por le tuen cors plorédes!
Cist duels l'avrat encui par acoréde.

"O filz, cui iérent mes granz eredítez,
Mes larges terres dont jo aveie assez,
Mi grant palais en Rome la citét?
Empor tei, filz, m'en esteie penez;
Puis mon decès enfusses onorez.

2. Huelins frére, dist Auberons li ber,
Quant m'aparlas, tu fesis que senés,
Tu en ouvras con bien endotrinés;
Car par celui qui en crois fu penés,
Mais tant bons jors ne te fu ajornés.
Tu ne mengas, bien a trois jors passé
Que bien n'eüsses mengié a un disner;
Ore en avras, o molt grande plenté,
De tel vïande que vauras demander.

3. Bien sai de l'arbre, c'est la fins,
Que ce estoit li plus biax pins
Qui onques sor terre creüst;
Ne cuit c'onques si fort pleüst
Que d'ève i passast une gote,
Einçois coloit par desor tote.
A l'arbre vi le bacin pandre,
Del plus fin or qui fust a vandre
Encor onques en nule foire.

4. Or poéz savoir que molt de cels de l'ost alérent a veoir Costantinople, et les riches palais et les altes yglises dont il avoit

tant, et les granz richesces (que onques en nule vile tant n'en ot). Des saintuaries ne covient mie a parler; que autant en avoit il a icest jor en la vile com el remanant del monde. Ensi furent molt comunel li Grieu et li François de totes choses, et de mercheandises et d'autres biens.

(*a*) Turn the above extracts into idiomatic Modern French.

(*b*) Turn the first two extracts into the original Low Latin.

(*c*) Describe briefly the Low Latin phase of the language, showing generally its relation to Latin on the one hand and to Old French on the other.

(*d*) Mention all the words in the poetic extracts that have (1) fallen into disuse or (2) changed their meaning.

(*e*) *halte, pédre, pechables, avoglez, lairmes, avrat.* Show in detail the phonetic changes undergone by these words in passing from Latin into Modern French, and give rules.

(*f*) Give some account of the part played by analogy in the formation of the French language. Refer, where you can, to the extracts.

B.

1. Explain briefly the versification of the poetical works read. Trace the development of this principle of versification up to the time of its adoption in Old French.

2. To what *cycles* do the poetical works from which the extracts are taken belong?

3. Give an account of the satirical poetry of the thirteenth century.

4. Give a brief account of the dramatic literature of the fifteenth century.

FIRST YEAR AND FINAL HONOURS.

German.

(NOTE.—First year Candidates will omit A. 2.)

A.

Translate into German:

1. In his youth Schiller had to struggle with all sorts of obstacles and at times even to suffer want. His spirits were, therefore, often depressed and there were periods when he had doubts of everything, even of himself and his poet's calling. Once when he was in such a crisis, something entirely unexpected happened him. He received by post in Mannheim a package from Leipzig. In it was a costly pocket book of silk with artistic embroidery, a musical composition of one of his own songs and four portraits, two of which were of ladies and two of gentlemen, all of whom were total strangers to him. The letters accompanying the package expressed warm thanks to, and enthusiastic admiration for, the poet. Schiller was greatly elated at this recognition; and this seemingly small cause had a great effect, for it again raised his fallen courage; and the certainty that his poetry had begun to awaken the longed-for echo in the hearts of his countrymen gave him renewed confidence.

Translate into German prose:

2.

Once upon a midnight dreary, while I pondered, weak and weary,
Over many a quaint and curious volume of forgotten lore—
While I nodded, nearly napping, suddenly there came a tapping,
As of some one gently rapping, rapping at my chamber-door;
"'Tis some visitor," I muttered, "tapping at my chamber-door—
Only this and nothing more."

Ah! distinctly I remember it was in the bleak December,
And each separate dying ember wrought its ghost upon the floor.
Eagerly I wished the morrow; vainly I had sought to borrow
From my books surcease of sorrow—sorrow for the lost Lenore—
For the rare and radiant maiden whom the angels name Lenore—
Nameless here for evermore.

And the silken sad uncertain rustling of each purple curtain
Thrilled me—filled me with fantastic terrors never felt before;

So that now, to still the beating of my heart, I stood repeating:
"'Tis some visitor entreating entrance at my chamber-door—
Some late visitor entreating entrance at my chamber-door:
That it is, and nothing more."

B.

Subject for German Composition:

"Das Neue Jahrhundert."

or

"Klare Rechnung" (Flaischlen).

FIRST YEAR AND FINAL HONOURS.

German.

NOTE.—First year Candidates will omit B.

A.

Translate:

1. Er hatte einst mit meinem lieben, ach, gar zu früh in die ewige Herrlichkeit genommenen Vater zu Jena die Rechte studiret und war auch nachmals den Künsten und Wissenschaften mit Fleisse obgelegen, so dass er dem Hochseligen Herzog Friedrich bei seinem edlen, wiewohl wegen der Kriegsläufte vergeblichen Bestreben um Errichtung einer Landesuniversität ein einsichtiger und eifriger Berather gewesen. Obschon ein adeliger Mann, war er meinem lieben Vater doch stets in Treuen zugethan geblieen, hatte auch nach dessen seligem Hintritt sich meiner verwaiseten Jugend mehr, als zu verhoffen, angenommen und nicht allein meine sparsamen Mittel aufgebessert, sondern auch durch seine vornehme Bekanntschaft unter dem Holländischen Adel es dahin gebracht, dass mein theurer Meister van der Helst mich zu seinem Schüler angenommen. Th. Storm.

2. Die europäische Atmosphäre war mit vielen ungesunden Dünsten geschwängert, welche die Stagnation eines langen Friedens darin angesammelt hatte. Man zehrte an den Reminiszenzen der Vergangenheit; man schien auf die Zukunft zu verzichten. Die französische Revolution und das Napoleonische Weltregiment hatten die Schöpfungskraft des geschichtlichen Geistes in so grossartiger Weise an den Tag gelegt, die äussern und innern Verhältnisse der Staaten so gewaltsam über den Haufen geworfen, dass sich die Völker nach Ruhe zu sehnen schienen, und das Friedensfürstentum der heiligen Allianz anfangs freudig begrüsst wurde. Doch als die Diplomatie begann, den Besitzstand der Fürsten zu regeln, ohne die Interessen der Völker zu befragen, und mit übertriebener Angst vor der geistigen Regsamkeit, deren vulkanische Wirkungen noch schreckhaft vor den Gemütern standen, alle Strömungen in das engste Bett einzudämmen; als die Jugend, die Zukunft, der Fortschritt zu Verbrechen gestempelt wurden: da bemächtigten sich Missmut und Unzufriedenheit aller strebenden Geister, und es begann

gegen die allgemeine Restauration in Staat and Kirche, Recht und Sitte, teils in geheimen Bündnissen und Verschwörungen, teils in wissenschaftlichen Doktrinen eine heftige Opposition.

R. von Gottschall

B.

Translate into Modern High German:

1. Ih gihu *gote* alamahtîgen fater inti allên sînên sanctin inti desên uuihidôn inti thir gotes manne allero mînero sunteno, thero ih gidâhda inti gisprah inti gideda . . . thaz uuidar gote uuâri inti daz uuidar mînera cristanheiti uuâri inti uuidar mînemo gilouben [inti uuidar mîneru uuîhûn doufî] inti uuidar mîneru bigihdi.

Lorscher Beichte.

2. Nu sehent, wie sælic die sint, die da reinez herze tragent. Ir, junge werlt, die noch unbewollen sint mit sünden, behaltent iuwer herze vor allen tœtlichen sünden, so werdent ir got sehende in solichen freuden und in so grozen eren, die ouge nie gesach oder ore nie gehorte, alse sant Paulus da sprichet; und alse sant Johannes sprichet: "wær ez müglich, daz man ez alles samt geschriben möhte, so möhte diu werlt diu buoch in ir niht behalten, da ez an gestüende, daz ich gesach. Und allez, daz ich gesach, daz was niht wan got alleine."

Berthold von Regensburg.

PRELIMINARY AND FINAL HONOURS.

German.

A.

(*a*) Dem Herrlichsten, was auch der Geist empfangen,
Drängt immer fremd und fremder Stoff sich an;
Wenn wir zum Guten dieser Welt gelangen,
Dann heisst das Bessre Trug und Wahn.
Die uns das Leben gaben, herrliche Gefühle
Erstarren in dem irdischen Gewühle.

(*b*) Auch was Geschriebnes forderst du Pedant?
Hast du noch keinen Mann, nicht Manneswort gekannt?
Ist's nicht genug, dass mein gesprochnes Wort
Auf ewig soll mit meinen Tagen schalten?
Ras't nicht die Welt in allen Strömen fort,
Und mich soll ein Versprechen halten?

(*c*) Oder wissen Sie nicht mehr, was Sie uns für eine Pauke hielten, als wir von der Schule abgingen?! Man habe schritt zu halten mit der Zeit und vorwärts zu gehen. Man müsse in die Zukunft denken. Die Zukunft allein habe Recht. Und man dürfe vor allem keine Gewohnheit Herr werden lassen. Gewohnheit sei Gedankenlosigkeit und Stehenbleiben und Einfrieren. Und alles Stehenbleiben sei Rückschritt. Das bezöge sich nicht bloss auf den Einzelnen, das bezöge sich auch auf das ganze Volk.

(*d*) Hat sich der Landmann solcher That verwogen,
Aus eignem Mittel, ohne Hülf' der Edeln,
Hat er der eignen Kraft, so viel vertraut—
Ja, dann bedarf es unserer nicht mehr;
Getröstet können wir zu Grabe steigen,
Es lebt nach uns—durch andre Kräfte will
Das Herrliche der Menschheit sich erhalten.

(*e*) Zudem, ich seh' nun wohl,
Religion ist auch Partei; und wer
Sich drob auch doch so unparteiisch glaubt,
Hält, ohn' es selbst zu wissen, doch nur seiner
Die Stange. Weil das einmal nun so ist;
Wird's so wohl recht sein.

1. Refer each of the above passages to its context; write in German a commentary on (*a*), (*b*), (*e*), and translate (*c*) and (*d*).

2. Explain in idiomatic German :

Ich habe eben mein Studium an den Nagel gehängt.—Der Regen hatte nachgelassen.—Pater Anselm predigte unter ungeheurem Zulauf aus der ganzen Gegend.—Ich sage dir, bemogeln gilt durchaus nicht.—Der Graf hatte ihn darum angegangen.—Manchmal hielt er in der Arbeit inne.—Klas musste mit tüchtigen Ruderschlägen einsetzen.—Aber diese . . . verbaten sich mit tiefen abwehrenden Knixen diese ungebührende Ehre.—Bedenke ob es wohl klug . . . von den anderen hervorzustechen.—Da geriet Hans vor Wut ausser sich; er fuhr ihn wie ein hungriger Wolf an.—Sprecht, wessen soll man sich zu euch versehen.—Man sagt du nehm'st es auf mit jedem Schützen.—Dass er mit Stumpf uud Stiel sie zu vertilgen vorgesetzt.—Lasst ihm mit eins den Plunder ganz im Stiche, Um den es ihm zu thun.

3. Translate into idiomatic German :

I have enough of it.—It is enough to make one mad.—If she asks for me, say I am out.—No, thank you.—They grouped the wreathes with a taste for which you would not have given them credit.—He went into the office and made enquiries.—I must draw your attention to the fact that, as a guest on my boat, you will have to conform to its ways.—He took leave, never to see them again.—You must answer for your deeds.—I am sorry for you.—It is your turn now.—I only came to ask the patriarch's advice.—I have come on your command, Saladin.

B.

1. Der wahre Beruf der Menschheit ist, unablässig nach den Ideen zu streben, mit dem Gefühl, sie nie völlig erreichen zu können. Aus diesem Leitmotif ergeben sich die drei Knotenpunkte der Fausthandlung, ... die dem alten Stück als neue Grundsteine untergebaut sind.

Comment on the above with more special reference to *die drei Knotenpunkte* in their relation to one another, and also to *dem alten Stück.* Quote what you can with reference to these *Knotenpunkte.*

2. Sketch the principal character of *Nathan der Weise,* in whom Lessing's idea of true religion is embodied. Quote from, or refer to passages in, the play generally in support of this conception.

3. How far are the requirements of the regular drama fulfilled in the German dramas under consideration?

4. Write in German, with a brief survey of each work, your conception of the meaning of *Der Bunte Vogel*, *Das Sonnenblatt*, *Der Diamant*.

5. "Der Rhein in der Geschichte und in der Dichtung." A brief elaboration of the foregoing, after *Geschichten vom Rhein*.

Quote *Erlkönig* or *Mignon*.

C.

1. Show how far the "Sturm und Drang" is reflected in the first part of *Faust*.

2. State concisely the circumstances that led to the production of *Nathan der Weise*. Refer any passages or characters of the play to these circumstances.

3. Compare from a literary point of view the last quarter of the eighteenth century with that of the nineteenth.

4. Write notes on Paulus Gerhardt, Gottsched, Bodmer, Wieland, Klinger, Jean Paul, Grillparzer, Freytag.

PRELIMINARY AND FINAL HONOURS.

German.

Dictation.

Als Astolf um dreiviertel auf neun am Bahnhofsgebäude vorfuhr, war sein Zug seit einer Viertelstunde fort. Er hatte geglaubt, die Abfahrtszeit ganz sicher im Kopf zu haben, und nur nicht gedacht, dass es die des Sommerfahrplanes war und das Kursbuch bereits seit Oktober andre Zahlen aufwies; wenigstens für diesen Zug. Das Unglück war nicht gross: um halbzwöif kam der Kurierzug Rom-München-Berlin durch, der den Neunuhrschnellzug bereits in Berlin einholte. So belehrte ihn der Bahnhofsinspektor, ein alter Bekannter, der, wenn er sich recht erinnerte, in den unteren Klassen des Gymnasiums dieselbe Bank mit ihm gedrückt hatte. Mit den paar Stunden würde er schon fertig werden. Die Hauptsache war, dass Susi nichts von der Kalamität erfuhr. Von nach Hause zurückkehren konnte deshalb keine Rede sein. Das arme Kind aus ihrem ersten, mühsam errungenen erquickenden Schlaf aufstören, das hätte noch gerade gefehlt!

"Macht möglichst wenig Lärm und sagt auch den Mädchen und Frau Poltrok nichts! Morgen früh meinetwegen; und ich liesse die gnädige Frau nochmals schönstens grüssen! Aber heute abend kein Wort! Hört ihr!"

Der Wagen war weggeschickt. Astolf sass in der Bahnhofsrestauration, neben ihm der Inspektor, den er zu einer Flasche Wein eingeladen hatte. Der Mann berichtete, als Hoheit am Mittwoch abfuhr, habe er zu ihm gesagt, er werde jedenfalls an Sonnabend abends zurück sein.

FINAL HONOURS.

German.

A.

(*a*) Er mache—
O, sagen Sie es ihm! das Traumbild wahr,
Das kühne Traumbild eines neuen Staates,
Der Freundschaft göttliche Geburt. Er lege
Die erste Hand an diesen rohen Stein.

(*b*) Und deine Sanftmuth, dein gefällig Wesen,
Dein schneller Blick, dein richtiger Verstand,
Mit dem du jedem giebst, was ihm gehört,
Dein Gleichmuth, der erträgt, was zu ertragen
Der Edle bald, der Eitle selten lernt,
Die kluge Herrschaft über Zung' und Lippe—
Mein theurer Freund, fast ganz verkenn' ich dich.

(*c*) Wie gross, wie schön der Plan! Wie nah die Hoffnung ihrem Ziele! Und nun im Augenblick des Entscheidens bist du zwischen zwei Uebel gestellt; wie in einen Loostopf, greifst du in die dunkle Zukunft; was du fassest, ist noch zugerollt, dir unbewusst, sei's Treffer oder Fehler!

(*d*) Lasst mir so lange Ruh', ihr Unterird'schen,
Die nach dem Blut ihr, das, von meinen Tritten
Hernieder träufelnd, meinen Pfad bezeichnet,
Wie losgelassne Hunde spürend hetzt.

(*e*) Warum musst' ich ihm in die Augen sehn!
Die Züge schaun des edeln Angesichts!
Mit deinem Blick fing dein Verbrechen an,
Unglückliche! Ein blindes Werkzeug fordert Gott,
Mit blinden Augen musstest du's vollbringen!

(*f*) Die Erfüllung
Der Zeiten ist gekommen, Bürgermeister.
Die Hohen werden fallen, und die Niedrigen
Erheben sich—Behaltet's aber bei euch!
Die spanische Doppelherrschaft neiget sich
Zu ihrem Ende, eine neue Ordnung
Der Dinge führt sich ein—Ihr saht doch jüngst
Am Himmel die drei Monde?

(*g*) Täglich und Stündlich, wenn er die allezeit schönen Gipfel seiner Berge anschaute und die reine Luft mit vollen Zügen einsog,

kam es ihm mehr als ein Räthsel vor, dass er seines Lebens Glück erst im Erklären und Deuten vergilbter Schriften gesucht.

(*h*) Und mit der Abtissin Thränen
Schliesst gerührt auch die Geschichte
Von dem jungen Spielmann Werner
Und der schönen Margaretha.

(*i*) "Wenn der Prinz sich in meinem Hause wohl fühlen und unserm Brauch fügen kann, so bin ich zu jeder anständigen Aufmerksamkeit erbötig. In meinen Vorträgen führe ich seinetwegen keine Aenderung ein. Besucht er als Student eines meiner Collegien, gut. Auf seinem Zimmer lese ich weder ihm noch jemand Anderem."

1. Give context of each of the above extracts; translate (*b*) and (*i*), and rewrite (*d*) in German prose order.

B.

1. What use does Schiller make of the "fate" principle in the dramas read? How far do you consider this a justifiable principle of dramatic art?

2. *Maria Stuart* is sometimes compared to the last act of a Shakespearian tragedy. Why?

3. Is Gœthe's deviation from his original in *Iphigenie* an improvement, and, if so, why?

4. (*a*) Compare or contrast *Ekkehard* with *Gelimer*. (*b*) What methods are permissable in historical novels? Which is followed in each case here? (*c*) What do you consider the *Schwerpunkt* of the action of *Ekkehard*?

5. (*a*) How far is the *Zeitgeist* reflected in *Die Verlorene Handschrift*? (*b*) State any defect in this work, giving reasons.

6. Name the authors of the following ballads; give in German a *résumé* of any one of them and quote any other: —*Der Fischer, Der Gang nach dem Eisenhammer, Die Verlorene Kirche, Das Riesenspielzeug, Lützow's wilde Jagd.*

C.

1. What restricted in its effects the literary activity produced by the Reformation?

2. How did Frederick the Great influence German literature?

3. Mention some of the most noted literary centres of Germany during the last half of the eighteenth and the first half of the nineteenth century. Name a few of the leading literary men connected with each.

4. Notes on Bürger, Herder, Tieck, Kleist, Spielhagen, Sudermann, *Wilhelm Meister*, *Wahlverwandschaften*, *Soll und Haben*.

FINAL HONOURS.

German.

A.

Translate into Modern German:

1. Ith bithe warth sundro, frehun ina thai bi ina mith thaim twalibim thizos gajukons. jah qath im: izwis atgiban ist kunnan runa thiudangardjos guths, ith jainaim thaim uta in gajukom allata wairthith, ei saihvandans saihvaina jah ni gaumjaina, jah hausjandans hausjaina jah ni frathjaina, nibai hvan gawandjaina sik jah afletaindau im frawaurhteis. jah qath du im: ni wituth tho gajukon, jah hvaiwa allos thos gajukons kunneith? sa saijands waurd saijith. aththan thai withra wig sind, parei saiada thata waurd, jah than gahausjand unkarjans, suns qimith Satanas jah usnimith waurd thata insaiano in hairtam ize.

2. Thaz Kristes uuort uns sagetun, ioh druta sine uns zelitun,
bifora lazu ih iz al. so ih bi rehtemen scal;
Uuanta sie iz gisungun harto in edilzungun,
mit gote iz allaz riatun, in uuerkon ouh giziartun.
Theist suazi ioh ouh nuzzi, inti lerit unsih uuizzi,
himilis gimacha: bi thiu ist thaz ander racha.
Ziu sculun Frankon, so ih quad, zi thui einen uuesan ungimah,
thie liutes uuiht ni dualtun, thie uuir hiar oba zaltun?

3. Die wunden vluzzen sere alsam si taten e.
die e da sere klageten, des wart nu michel me.
do sprach der kunic Gunther "ich wil'z iuch wizzen lan.
in sluogen schachaere: Hagene hat es niht getan."

"Mir sint die schachære," sprach si, "vil wol bekant.
nu laze ez got errechen noch siner vriunde hant.
Gunther unde Hagene, ja habet ir iz getan."
die Sifrides degene heten do ze strite wan.

(*a*) Make a general classification of the verbs in 1.

(*b*) *warth, frehun, qath, atgiban, saijith, usnimith, hausjand,* (1). Give the principal parts of each of the foregoing; and the present and preterit indicative in full of *warth.*

(*c*) Decline *gajukons* (line 1), *wig*, *waurd*, *hairtam*, (1).

(*d*) Conjugate in full in the present and preterit indicative *lazu*, *lerit*, *ist*, (2). Give in full the same tenses of these verbs in Gothic and in MHG.

(*e*) Decline *himilis*, *nuzzi*, *rache*, *luites*, (2).

(*d*) *taten*, *wil*, *hat*, (3). Give present and preterit indicative in MHG, OHG, and Gothic.

(*f*) *vriunde*, *hant*, (3). Decline in MHG, OHG, and Gothic.

B.

1. Show the relation of the various Germanic languages to each other and to the primitive German tongue.

2. Give instances from NHG and MHG of verbs that in any of their conjugational forms show the change of *d* to *t* or of *s* to *r* respectively. What is this change called?

3. Explain historically (*a*) the conjugational forms of *gehen*, *stehen*, *thun*, and (*b*) the augment (*ge*) of the past participle.

4. Explain (*a*) the formation of the *Ablaut-series*, (*b*) the preterit formation of weak verbs, and (*c*) the peculiarities of the *präterito-präsentia* verbs.

C.

1. Give a brief account of OHG poetry, and describe the versification employed.

2. Sketch in German the *Niebelungenlied*, and state the various elements entering into the composition of the subject-matter.

3. Give a brief account of the lyric poetry of the second period of German literature.

FINAL HONOURS.

Italian.

A.

(*a*) Ed io: Maestro, già le sue meschite
Là entro certo nella valle cerno
Vermiglie, cum se di fuoco *uscite*
Fossero. Ed ei mi disse: Il foco eterno,
Ch' entro le affoca, le dimostra rosse,
Come tu *vedi* in questo basso inferno.
Noi pur *giugnemmo* dentro all' alte fosse,
Che vallan quella terra sconsolata:
Le mura mi parea che ferro fosse.

(*b*) Divulgossi il gran caso; e quivi tratto
Già il popol s'era: Olindo anco v'*accorse*
Chè, dubbia la persona, e certo il fatto,
Venìa, che fosse la sua donna, in forse.
Come la bella prigioniera in atto
Non pur di rea, ma di dannata ei scôrse;
Come i ministri al duro ufficio intenti
Vide, precîpitoso *urtò* le genti.

Al re gridò: Non è, non è già rea
Costei del furto, e per follia sen vanta.
Non pensò, non ardi, nè far *potea*
Donna sola e inesperta opra cotanta.
Come ingannò i custodi, e della Dea
Con qual arti involò l'imagin santa?
Se il fece, il narri. Io l'ho, signor, furata.
(Ahi! tanto amò la non amante amata.)

(*c*) Il signor guidice è un bravo galantuomo, a quel che pare, e mi lasciò dire come voi adesso, e di tanto in tanto rideva; malan-n'aggia tanto mercato per essere stato in molle cinque minuti? E che colpa ci ho io, se questi tali, che fanno il mestiere di darla a intendere a una povera tosa, hanno le gambe di stracci?

(*d*) Poichè la prendete su questo tuono, vi diró, o signore, che in un paese già fatto indipendente, e costituito a Nazione, ognuno ha diritto di avere la propria opinione sul modo di governarlo; ma in un paese che vede tuttora accampato lo straniero sulle sue terre, l'opinione non può éssere che una, cacciarlo fuori. Chi opina diversamente, chi parteggia per esso, è un traditore della patria.

(*e*) In questa solitudine si annoja mortalmente, come tu, forse, ti annoji nelle popolose città. Tua moglie è giovine tanto: è inesperta: ogni volta che ti opponi a un suo desiderio, si figura nella tua persona, un tiranno che voglia *seppellire* in questi campi la sua giovinezza, il suo riso e la innocente vanità di essere ammirata per bella e piacere. Di qui, la decisione di rompere la catena, ritornando a sua madre. Decisione non ragionevole, che sono ben lungi dallo scusare . . . ma, siamo giusti, Egidio, tua moglie *contrappone* a questi difetti un fondo di vera onestà. . .

1. Translate the above extracts, and refer each to its context.

2. Write the present and pretente indicative in full of the italicised verbs in (*a*), (*b*), and (*e*).

3. *chi parteggia* (*d*)—What are the relative pronouns in Italian, and how are they used?

4. Compare *La Divina Commedia* with Gœthe's *Faust.*

5. Sketch in Italian the character of Cesare.

B.

1. Who were Dante's principal literary contemporaries? Sketch the life and works of any one of them.

2. From Dante to the nineteenth century how is the history of Italian literature usually divided? Characterize each period.

3. What influence had Molière on Italian literature? Give an account of the life and works of Goldoni.

4. Give an account of Alfieri and an estimate of his place in Italian literature.

5. How did the general romantic movement at the beginning of the nineteenth century affect Italian literature? Name its principal representatives here, and give an account of one of them.

6. Notes on Guido Cavalcanti, Machiavelli, Parini, Aleardi.

FINAL HONOURS.

Italian.

A.

Translate into English:

Un giorno le diedi un mio libro.—L'ha scritto lei?—mi domandò. —Si,—risposi.—Tutto di suo pugno?—Tutto di mio pugno.—Lo tenne due o tre giorni e vidi che lo leggeva. Quando me lo restituì, mi disse:—Bravo! mi son divertita; si vede che è un buon figliuolo. E poi mi piacque anche lo stile.

A poco a poco mi prese a voler bene, mi parlava lungamente della buon' anima di suo marito, delle sue amiche, del caro dei viveri, delle tasse, del lotto, dei suoi malanni, della religione, sempre colla stessa grazia e colla stessa dolcezza. Ma specialmente quando parlava della sua disgrazia d' esser rimasta sola al mondo e dicevache la notte, non potendo dormire, pensava, pensava, fin che si metteva a piangere, aveva parole così dolci, così schiette, così poetiche, che mi stringeva il cuore, e nello stesso tempo provavo una specie di voluttà artistica a sentirla. Mentre essa parlava la sua bella lingua, io, appoggiato alla finestra della sua cameretta guardavo il campanile di Giotto dorato dalla luce del tramonto, e provavo uno struggimento d' amore per Firenze.

B.

Translate into Italian:

TO A DRY FLOWER.

Here you are between my hands, under my eyes. There is nothing left of what was marvellous in you. You have neither color nor perfume. The wind no longer rocks you; the insects do not seek you; the butterflies have forgotten you. To see you one would scarcely believe you were a flower. No one would believe you were beautiful if I had not affirmed it. Well, in this cold and resigned look of yours you are worth to me more than all the flowers which adorn or will adorn all the gardens of the earth. It is not because the trembling hand of a woman happened to pull you from the delicate branch which gave you your life, for such a happy fate did not fall to you. It is not because you know the pleasure of resting on the bosomsof her whom I love or have felt the heavenly contact of her lips. No, on a dark night when everything around you was silent and you were sleeping, dreaming perhaps of the glad sun of the morrow, I came and pulled you.

HONOURS.

English—Anglo-Saxon.

1. Translate:

(1) *Th*a asprang his hlisa geond *th*a land wide, and eac swilce
(2) to Irlande, and eac su*th* to Franclande, swa swa sum mæsse-
(3) preost be anum men*n* sæde. Se preost cwæ*th* *th*æt an wer
(4) wære on Irlande gelæred, se ne gymde his lare, and he lit-
(5) hwon hogode embe his sawle *th*earfe o*thth*e his Scyppendes
(6) beboda, ac adreah his lif on dyslieum weorcum, o*th* *th*æt he
(7) wear*th* geuntrumod and to ende gebroht. *Th*a clypode he
(8) *th*one preost *th*e hit cydde eft *th*us, and cwæ*th* him to sona
(9) mid sarlicre stemne: "Nu ic sceall geendian earmlicum
(10) dea*th*e, and to helle faran for fracodum dædum, nu wolde ic
(11) gebetan, gif ic abidan moste, and to Gode gecyrran and to
(12) godum *th*eawum, and min lif awendan eall to Godes willan;
(13) and ic wat *th*æt ic ne eom wyr*th*e *th*æs fyrstes buton sum
(14) halga me *th*ingie to *th*am Hælende Criste. Nu is us gesæd
(15) *th*æt sum halig cyning is on eowrum earde, Oswold gehaten.
(16) Nu gif *th*u ænig *th*incg hæfst of *th*æs halgan reliquium, syle
(17) me ic *th*e bidde."

2. Parse the following words, giving the principal parts of the verbs and declining the nouns in full:—*beboda*, l. 6; *adreah*, l. 6; *awèndan*, l. 12; *thingie*, l. 14; *syle*, l. 16.

3. Decline in all genders the demonstrative "this."

4. Conjugate throughout "biddan" (to pray).

5. Translate:

(*a*)

Us Godrie hæf*th*
earh Oddan bearn, ealle beswicene:
wende *th*æs for moni mann, *th*a he on meare rad,
on wlancan than wicge, thæt wære hit ure hlaford.

(*b*)

Heo *th*a fæh*th*e wræc,
*th*e *th*u gystranniht Grendel cwealdest
*th*urh hæstne had heardum clammum
for than he to lange leode mine
wanode and wyrde.

6. Put into Anglo-Saxon the following sentences :

(*a*) Then king Alfred gave orders to build eighty-three ships against the pirates and to go with nine of them to the Seine.

(*b*) The same year king Edward came to the crown and took from Odda all his land and all that he owned.

7. Make a four column analysis (i.e. root, oldest and middle-English forms) of the following words, with explanatory remarks : *Lord, harbour, fresh, Canterbury, Exeter.*

HONOURS.

English.

FIRST PAPER.

1.

Festivals have I seen that were not names:
This is young Buonaparte's natal day,
And his is henceforth an established sway—
Consul for life. With worship France proclaims
Her approbation, and with pomps and games.
Heaven grant that other cities may be gay!
Calais is not: and I have bent my way
To the sea-coast, noting that each man frames
His business as he likes. Far other show
My youth here witnessed, in a prouder time;
The senselessness of joy was then sublime!
Happy is he, who, caring not for Pope,
Consul, or King, can sound himself to know
The destiny of Man and live in hope,

(*a*) Explain clearly the occasion of this sonnet and the references and comparisons the writer makes in it. Comment on the moral attitude, the hope, faith, or fear revealed in it, as representative of the writer at this period.

(*b*) Write briefly on the value of the thought in this sonnet.

(*c*) Point out the peculiarities in the structure of this sonnet, with comments. To what class of sonnets does it belong?

(*d*) Characterize the style generally, that is, the character and range of the phraseology in this sonnet. How would it compare in these respects with the sonnet commencing "Milton! thou should'st be living at this hour"?

2.

This was the answer that came from the Tutor, the grave man, Adam.
When the armies are set in array, and the battle beginning,
Is it well that the soldier whose post is far to the leftward

Say, I will go to the right, it is there I shall do the best service?
There is a great Field-Marshal, my friend, who arrays our battalions;
Let us to Providence trust, and abide and work in our stations.
This was the final retort from the eager, impetuous Philip.
I am sorry to say your Providence puzzles me sadly;
Children of Circumstance are we to be? You answer, On no wise!
Where does Circumstance end, and Providence, where begins it?
What are we to resist, and what are we to be friends with?
If there is battle, 'tis battle by night, I stand in the darkness.
Here in the mêlée of men, Ionian and Dorian on both sides,
Signal and password known; which is friend and which is foeman?
Is it a friend? I doubt, though he speak with the voice of a brother.
Still you are right, I suppose; you always are and will be;
Though I distrust the Field-Marshal, I bow to the duty of order,
Yet is my feeling rather to ask, where *is* the battle?

(*a*) Explain the point debated and Philip's position with regard to it.

(*b*) Scan the last five lines. Give an estimate of the powers and capacities of the Hexameter as used by Clough. In this estimate precise standards and criteria, not descriptive phrases alone, are to be used.

HONOURS.

English.

SECOND PAPER.

1. *Ode, Intimations of Immortality.* (*a*) State clearly the movement of the poet's thought in this poem. Explain the fundamental idea in it, and quote passages from the *Prelude*, or any other of Wordsworth's poems, which further illustrate that idea.

(*b*) Characterize the style of this ode and give an estimate of Wordsworth as a writer of odes generally.

2. Explain carefully the meaning of the following extracts in connection with the context and the general meaning and teaching of the poems foom which they are taken :—

(*a*) Faith buried deeper in her own deep breast
Her stores, and sighed to find them insecure.

(*b*) Me this unchartered freedom tires;
I feel the weight of chance desires.

(*c*) Give me the line that ploughs its stately course,
Like a proud swan, conquering the stream by force.

(*d*) Here, work enough to watch
The Master work, and catch
Hints of the proper craft, tricks of the tool's true play.

(*e*) King Bomba's lazzaroni foster yet
The sacred flame, so Antonelli writes.

(*f*) And worst of all, a treasonable growth
Of indicisive judgments, that impaired
And shook the mind's simplicity.

(*g*) Here's Giotto, with his Saint a-praising God,
That sets us praying,—why not stop with him?

3. Give an account of *The Old Cumberland Beggar*,

illustrating particularly from it the qualities of thought and style which characterize Wordsworth.

4. Shelley belongs to the Revolution, Wordsworth to the Reconstruction. Explain this, and show the fundamental ideas on which Shelley's poems *Queen Mab*, *Masque of Anarchy*, and *Prometheus Unbound* are based.

Extra-mural Students may also take one of the following questions.

5. In his essay on Byron, Arnold quotes three critical phrases from Goethe. Expand these phrases and show whether or not they are just by reference to *Lara* or *The Bride of Abydos.*

6. Give and comment on Arnold's estimate of Cowper and Chapman as translators of Homer.

HONOURS.

English.

THIRD PAPER.

Section A.

1. An essay on the value of Carlyle's work *as a historian* with special reference to the ethical principles which underlie it.

2. Give the leading ideas and distinctions in Ruskin's chapter on *Finish*, with illustrations drawn from the art of writing as well as painting.

3. Illustrate from *A Blot in the 'Scutcheon* Browning's peculiar powers and defects as a dramatist.

4. Write a page on the style of each of the following writers :—Ruskin, Emerson, Thackeray.

Extra-mural Students may also take one of the following questions.

5. Emerson was in America a leader against formalism and materialism, as Carlyle was in England. Justify this statement by referriug to *The American Scholar.*

6. Give an account of Browning's *Cleon*, bringing out clearly the following points :—(1) Cleon's analysis of the illogical character of human life, (2) the stage of philosophical development represented by Cleon, (3) Browning's view of the general result achieved by Greek Philosophy.

HONOURS.

English.

FOURTH PAPER.

Section B.

1. Compare Chaucer and Byron in their manner of handling the octosyllabic verse. Give a sketch of the revival of the octosyllabic couplet in the 19th century as the vehicle of long narrative poems.

2. Illustrate Chaucer's attitude to chivalry and its manners and ideals from his earlier and later poems.

3. Write a page on the influence which each of the following writers exercised on Chaucer's work:—*Machault, Jean de Meung, Dante.*

4. Show the relations in which *The House of Fame* stands to the *Divina Commedia*, and give an estimate of the former as embodying Chaucer's view of his life.

5. Characterize the mediaeval elements in Chaucer's *Legend of Dido* both as regards the matter or treatment and the style.

HONOURS.

History.

FIRST PAPER.

1. How far may Tacitus be accepted as a guide in regard to the earlier Anglo-Saxon government?

2. Point out the relations of Church and State under the Anglo-Saxons, and what changes were made by William I.

3. State the mode of elections of Bishops under the Anglo-Saxons, and down to the reign of John, and also the form of investiture according to the compromise between Anselm and Henry I.

4. Point out the growth of the several courts, Exchequer, King's Bench, and Common Pleas.

5. State the constitution and jurisdiction of the Manorial courts.

6. What is the character of the Assize of Northampton, and of Arms? How was the assessment under the Assize of Arms to be determined?

7. Compare the Free Towns of England with the Communes of France.

8. How was the Jury of Presentment elected, and what change was made by the statute "Forma procedendi in placitis coronae Regis?"

HONOURS.

History.

SECOND PAPER.

1. State in general terms the Provisions of Oxford. How were they to be enforced?

2. In the Articles of the Barons in John's reigh it is laid down: Communia placita capiant assisas de *nova dissaisina*, *morte antecessories*, et *ultima praesentatione* nec aliquis ob hoc sit summonitus nisi jura tores et duac partes. Explain the words in italics. Who, according to the charter, were to be the juratores?

3. Who were summoned from each of the three estates to Simon de Montfort's parliament?

4. What constitutes the Clergy, the Peers, and the Commons as distinct estates? What circumstances led to the union of the Knights of the Shire with the representatives from the boroughs to form the House of Commons?

5. What circumstances led to the change from statutes and ordinances based on petition to Bills? What was the nature of the change?

6. What was the purpose of the statute "De Tallagio non concedendo."

7. Refute Rousseau's idea that liberty means the right to be governed by one's own will.

8. Guizot asks "Where does the right of sovereignty reside, and what is the principle on which it rests?" Give an answer.

9. What does Mill define as the limit of the authority of society on the individual?

HONOURS.

History.

THIRD PAPER.

1. Hallam mentions five essential checks on royal authority under the Tudors. To what efforts did the Crown resort in order to avoid these checks?

2. On what grounds did Hooker vindicate Elizabeth's supremacy over the Church?

3. When and under what circumstances did the House of Commons first obtain the privilege of determining contested elections?

4. What were the grounds of the prosecution of Peacham? How does the law of Edward III. define treason?

5. What are the three great privileges demanded by the Commons at the opening of Parliament? Mention any breach of these privileges under the Stuarts.

6. How did Pym construe the charges against Strafford into treason?

7. What was the origin of the Pale in Ireland?

8. State generally the terms of Poynings' Law.

9. "The impeachment of Sachverell involved some important constitutional questions." Explain this.

HONOURS.

History.

FOURTH PAPER.

1. Trace briefly the growth of Cabinet Government with Ministerial responsibility.

2. Account for the position of Whigs and Tories under the first two Georges. What occasioned the revival of the Tories on the accession of George III.?

3. How did the Reform Act of 1832 affect parties?

4. May asks, "Who can fail to recognise in party the very life-blood of freedom?" Criticise briefly this remark, pointing out the evils and merits of party.

5. What are the relations of Cabinet Ministers in England to the Sovereign and to Parliament? Compare with them the position of the Cabinet in the United States.

6. Compare the Form of Procedure in the British Parliament with that of the Congress of the United States.

7. A late writer points out that in his treatment of the American colonists George III. acted strictly within the limits of legal rights. Criticise his conduct?

8. Compare English and French colonial government especially as exemplified in Canada.

HONOURS.

Philosophy.

FIRST PAPER.

1. Is false opinion possible? Give the sophistic position and Plato's reply.

2. How does Plato deal with the cynic theory of the essential separateness of each idea? Discuss both theory and treatment in their application to society.

3. Which is primary, "Nature," or "God?" Give Plato's view and your own.

4. Is the virtuous man happy? State the Greek view and any modern view. Add your own criticisms.

5. Expound Aristotle's definition of tragedy, indicating the meaning of *κάθαρσις* in Greek philosophy.

HONOURS.

Philosophy.

SECOND PAPER.

1. *Πᾶσα διδασκαλία καὶ πᾶσα μάθησις διανοητικὴ ἐκ προϋπαρχούσης γίνεται γνώσεως.* Show how this principle applies to (*a*) mathematics, (*b*) dialectic, (*c*) rhetoric.

2. *Ἐπεὶ δὲ δεῖ πιστεύειν τε καὶ εἰδέναι τὸ πρᾶγμα τῷ τοιοῦτον ἔχειν συλλογισμὸν ὃν καλοῦμεν ἀπόδειξιν, ἔστι δ' οὗτος τῷ τάδ' εἶναι ἐξ ὧν ὁ συλλογισμός, ἀνάγκη μὴ μόνον προγινώσκειν τὰ πρῶτα, ἢ πάντα ἢ ἔνια, ἀλλὰ καὶ μᾶλλον.* Explain the relations of belief and knowledge.

3. Distinguish between *τὸ κατὰ παντός*, *τὸ καθ' αὑτό*, and *τὸ καθόλου*, giving instances of each.

4. *Οὐκ ἄρα ἔστιν ἐξ ἄλλου γένους μεταβάντα δεῖξαι, οἷον τὸ γεωμετρικὸν ἀριθμητικῇ.* Explain and discuss the principle here indicated.

5. *Ἔστι δ' ἡ μὲν ἀπόδειξις ἐκ τῶν καθόλου, ἡ δ' ἐπαγωγὴ ἐκ τῶν κατὰ μέρος.* State the relations of *ἀπόδειξις* and *ἐπαγωγή*.

HONOURS.

Philosophy.

THIRD PAPER.

1. "Durch Kant ist die ganze Weise der vormaligen Metaphysik und damit ihre Methode über den Haufen geworfen worden." Discuss the relations of the old Metaphysic, the Critical Philosophy and Absolute Idealism.

2. State and examine Hegel's criticism of Kant's doctrine that arithmetical judgments are synthetic.

3. "Kant nimmt die Synthetischen Grundsätze von der formalen Logik als gegeben auf." How far is this true?

4. "Das Ich hat, nach Kant's eigenen Ausdrnck, die Unbequemlichkeit, dass wir uns jederzeit seiner schon bedienen müssen, um ingend etwas von ihn zu urtheilen." Explain Hegel's criticism and estimate its value.

5. State and examine Hegel's criticism of Kant's Third Antinomy, and show how he connects it with the Antinomy of teleological judgment.

HONORS.

Philosophy.

FOURTH PAPER.

1. "Der allgemeine Begriff enthält die drei Momente, Allgemeinheit, Besonderheit, and Einzelnheit. Explain what Hegel means by "Begriff," and give a summary of the dialectic through which it passes.

2. How does the judgment of *Daseyn* pass into the judgment of *Reflexion?*

3. "Von Begriff ist gezeigt werden, dass er sich zur Objectivität bestimmt." What is meant by *Objectivität?* Show the relation of the stage thus reached to the ontological proof, and to Kant's criticism of that proof.

4. "Weun die Idee darum den Werth der Wahrheit nicht haben soll, weil sie in Ansehung der Erscheinungen *transcendent*, so ist diess ein sonderbarer Missverstand." What is the relation of the Hegelian to the Kantian *Idee?*

5. Explain what Hegel means by the "Method."

HONOURS.

Philosophy.

FIFTH PAPER.

1. Does freedom consist in freedom of choice? Give reasons for your answer.

2. What, according to Hegel, is the nature of evil? Discuss the question.

3. Is the higher conception a union of contradictory aspects? Refer to Plato and Hegel.

4. Is there a separate self? What is the relation of self to others? Compare Hegel's doctrine with the teaching of Greek philosophy.

5. How are we to conceive of time? Examine Hegel's view in reference to (*a*) history, (*b*) reality.

HONOURS.

Philosophy.

SIXTH PAPER.

Write a short essay on the value of Bradley's Metaphysic, dealing especially with his views of (*a*) space and time, (*b*) truth and error, (*c*) good and evil.

PRELIMINARY HONOURS.

Political Science.

FIRST PAPER.

1. Describe the general character of Canadian trade between 1800 and 1812. How did European conditions specially affect it?

2. What was the essential nature of the early municipal system of Upper Canada?

3. Discuss the policy and practice of the British Government in making settlements in Upper Canada after the war of 1812-15. What was the attitude of the Provincial Government?

4. How was the *jus naturale* related to the *jus gentium?*

5. What were the chief influences which destroyed the force of the *patria potestas* in the Roman system? What took its place?

6. Describe briefly the stages through which the essential features of the modern contract were developed.

7. Account for the development of the special interest of the state in the criminal law.

PRELIMINARY HONOURS.

Political Science.

SECOND PAPER.

1. Explain the fact that, while the unit of capital increases in productive power, its value, as measured in interest, tends to decline.

2. On what does the efficiency of labour depend? How is it to be measured?

3. Consider whether the distribution of wealth can be regulated by law to any greater advantage than the production of it.

4. What more or less permanent conclusions as to the possibility of eliminating poverty are to be derived from the history of the English poor laws?

5. How did the American Revolution affect the money supply and exchange system of Canada?

6. What were the economic functions served by the first banks in Canada?

FINAL HONOURS.

Political Science.

FIRST PAPER.

1. Describe the general character of Canadian trade between 1800 and 1812. How did European conditions specially affect it?

2. Discuss the policy and practice of the British Government in making settlements in Upper Canada after the war of 1812-15. What was the attitude of the Provincial Government?

3. Compare the earlier with the later arguments in support of the Navigation Act.

4. What typical evils and difficulties accompanied the development of British industry during the first half of the 19th century? How, and to what extent were these remedied?

5. Consider the practical value of the various *reserve* methods of regulating a paper currency.

6. In what cases are courts of arbitration likely to be successful in settling disputes between employer and employed?

7. What were the merits and defects of the physiocratic system as developed in France?

FINAL HONOURS.

Political Science.

SECOND PAPER.

1. State and criticise Carlyle's view of the function of government as given in Past and Present.

2. What is the social significance of Carlyle's statement that man's unhappiness comes of his greatness?

3. Estimate the value of Arnold's criticism of the "Englishman's heaven-born privilege of doing as he likes."

4. Compare the earlier and later forms of socialism.

5. How far is there a natural connection between the nihilism of Russia and the political and social conditions of that country?

6. What were the chief economic conditions which led to the general decline in prices during the nineteenth century? What influence had the nature of the currency standards?

7. Wherein consists the economic advantages of the United States over European countries?

FINAL HONOURS.

Political Science.

THIRD PAPER.

1. What is the gist of Smith's criticism of the Corn Laws? How far has his position stood the test of later experience?

2. State and examine Smith's theory as to the conditions determining the wages of labour.

3. How far does the growth of modern capital comply with Mill's views as to its normal increase and employment?

4. To what extent, up to the present, has Mill's forecast of the future condition of the labouring classes been fulfilled?

5. Explain the fact that, while the unit of capital increases in productive power, its value, as measured in interest, tends to decline.

6. Consider whether the distribution of wealth can be regulated by law to any greater advantage than the production of it.

7. Distinguish, in its nature and effects, the inheritance tax from other forms of direct taxation.

FINAL HONOURS.

Political Science.

FOURTH PAPER.

1. What value, in connection with the treatment of modern social problems, has the study of ancient institutions?

2. Trace the connection between the law of nature and international law.

3. Trace the development of the social freedom of women in the Roman state.

4. How is legal right related to other forms of right?

5. Explain the nature and development of remedial rights.

6. How is the range of modern international law determined? How are the peoples and territories beyond that sphere treated?

7. Examine, in the light of present political conditions, Mill's view of the infirmities and dangers of representative government.

FINAL HONOURS.

Political Science.

FIFTH PAPER.

1. What are the limitations of a purely philosophical treatment of the state?

2. How far can the state be identified with society?

3. How is the individual related to society?

4. Compare Bosanquet and Bluntschli as to the true function of the state.

5. What is the place and significance of nationality in the general development of society?

6. What are the essential features in a constitutional monarchy? How do these differ in expression as between Germany and England?

7. How does Aristotle seek to preserve at once the independence and harmony of the legislative, executive, and judicial powers in the state?

Senior Political Science.

Extra-mural.

1. On what ground does Plato draw a parallel between the nature of the individual and the nature of the state?

2. Compare the views of Plato and Locke as to the place of justice in the state.

3. Consider the validity of Locke's argument in support of government by majority.

4. Society realizes itself only in the individual. Explain.

5. How is the state related to the other organs of society?

6. Examine carefully the statement of Beaulieu that law creates no right. What is the basis of right?

HONOURS.

Modern Synthetic Geometry.

1. (*a*) Homologous sides of similar triangles are proportional. (*b*) In a concyclic quadrangle the rectangle on the diagonals is equal to the sum of the rectangles on pairs of opposite sides.

2. (*a*) If O be the mean centre of a system of points and P any point, show that

$$\Sigma(a\cdot AP^2)=\Sigma(a\cdot AO^2)+\Sigma(a)\cdot OP^2.$$

(*b*) If O be the incentre of $\triangle ABC$ find the value of $\Sigma(a\cdot AO^2)$ and $OA\cdot OB\cdot OC$.

3. (*a*) Find a condition that three points lying on the sides of a triangle may be collinear. (*a*) Tangents to the circumcircle of a triangle at its vertices intersect the opposite sides collinearly.

4. Show that a triangle is self-conjugate with respect to a circle whose centre is the orthocentre and radius is

$$\sqrt{\{4R^2-\tfrac{1}{2}(a^2+b^2+c^2)\}}.$$

5. (*a*) Show how to draw the circles of similitude and antisimilitude of two given circles. (*b*) With respect to the circle of antisimilitude the circle of similitude inverts into the radical axis.

6. (*a*) If three pairs of corresponding rays of two equianharmonic pencils intersect collinearly, the fourth pair intersect on the same line. (*b*) When four tangents form a harmonic system to a circle they intersect any other tangent in points which form a harmonic range.

7. (*a*) The points of intersection of opposite sides of a concyclic hexagram are collinear. (*b*) State the theorems which can be divided from (*a*) regarding the pentagon and quadrilateral and the polar reciprocal of one of them.

HONOURS.

Algebra, I.

1. Write the equation $x^3+3ax^2+3bx+c=0$ as an equation in y where $y=x+a$.

2. If between any two quantities there be inserted two arithmetic means A_1, A_2; two geometric means G_1, G_2; and two harmonic means H_1, H_2; show that

$$G_1 G_2 : H_1 H_2 = A_1 + A_2 : H_1 + H_2.$$

3. Show how to find the number of permutations of n objects r. at a time. How many of these will contain two specified objects?

4. (*a*) If $(1-x)^{-n} = 1 + {}^nH_1 x + {}^nH_2 x^2 + \ldots$ write the value of ${}^nH_r$ and show that (i) ${}^nH_r + {}^{n+1}H_{r-1} = {}^{n+1}H_r$, (ii) ${}^nH_r$ is the number of homogeneous terms of n dimensions which can be formed from n letters and their powers.

(*b*) Express $\sqrt[3]{4}$ as a series.

5. (*a*) Define e and express e^x in a series of powers of x.

(*b*) Show that

$$\log(1-x-2x^2) = -\{x + \tfrac{5}{2}x^2 + \tfrac{7}{3}x^3 + \tfrac{17}{4}x^4 + \ldots\}$$

and find the nth term of this series.

6. (*a*) Prove the principle of undetermined coefficients for a function of infinite dimensions. (*b*) Find the conditions that $x^4+ax^3+bx^2+cx+d$ may be a perfect square.

7. Find the generating functions of the series whose nth terms are $(2^n-3)x^n$ and $n(n+1)x^n$.

8. (*a*) Show that the value of a matrix is not changed by increasing any column by a multiple of any other column. (*b*) Expand and factor the determinant

$$\begin{vmatrix} x & y & z \\ x^2 & y^2 & z^2 \\ yz & zx & xy \end{vmatrix}.$$

HONOURS.

Trigonometry, I.

1. (*a*) Find an expression for all the angles which have the same sine as θ.

(*b*) Calculate all the values of $\tan(\frac{1}{3}\tan^{-1}1)$.

2. Draw the graphs of $\tan\theta$ and $\sin(\pi\cos\theta)$ between $\theta=0$ and $\theta=4\pi$.

3. (*a*) Deduce rules for factoring $\sin\theta+\sin\varphi$ and $\sin\theta-\cos\varphi$.

(*b*) The portion of a variable tangent intercepted by two fixed tangents to a circle is a minimum when it is bisected by the point of contact.

4. (*a*) Give two methods of finding the third side of a triangle when two sides and the included angle are given, deriving the principal formulae used.

(*b*) In any triangle

$$\tan\tfrac{1}{2}(A+B-C)=(a^2+b^2-c^2)/4\triangle.$$

5. (*a*) Give reasons for the use of the radian as a unit of angle and express its relations to other units.

(*b*) From each vertex of an equilateral triangle, as centre, arcs are described through the other vertices. Find the area of the triangular figure thus bounded by circular arcs, when the radius employed is 10.

6. (*a*) Show that, when θ is small, $\sin\theta=\theta$ and $\cos\theta=1-\frac{1}{2}\theta^2$.

(*b*) Show that $\pi=16\tan^{-1}\frac{1}{5}-4\tan^{-1}\frac{1}{239}$.

(*c*) Solve generally $\cos5x+\cos3x+\cos x=0$ and write out all particular solutions between 0° and 360°.

FACULTY OF PRACTICAL SCIENCE
AND PRELIMINARY HONOURS.

Conics, I.

(Candidates for Honours will omit the first 4 questions, and Science Candidates will omit the last 5 questions.)

1. (*a*) Find the distance between the points $(x_1\ y_1)$ and $(x_2\ y_2)$.

(*b*) Find the coordinates of the point which divides the distance in the ratio $m:n$.

2. Find the equation of the line which joins $(x_1\ y_1)$ to the intersection of $3x+2y-6=0$ and $x+4y-8=0$.

3. (*a*) Develop the conditions that the general equation may denote a circle to rectangular coordinates.

(*b*) What is the value of the radius, and what are the coordinates of the centre?

4. Give any way of describing an ellipse, and prove the property of the curve upon which the process is founded.

5. (*a*) Find an expression for the area of a triangle in terms of the coordinates of its vertices.

(*b*) *ABCD* are four points of which no three are in line. Prove that the area of the triangle whose vertices are the centroids of the triangles *ABC, BCD, CDA*, is one-ninth that of the triangle *DAB*.

6. Write the five special equations of a line, and explain what their parameters mean.

7. In the parabola prove:—

(*a*) Any tangent makes equal angles with the axis and the focal line to the point of contact.

(*b*) That three normals may be drawn from any point to a parabola, and that one, at least, is real.

8. (*a*) Define conjugate diameters for the ellipse or hyperbola, and one diameter being given show how to find the other.

(*b*) Prove that the sum of the squares on a pair of conjugate diameters of an ellipse is constant.

9. Find the equation of the bisectors of the angles between the lines denoted by $ax^2+2hxy+by^2=0$.

10. (*a*) Find the coordinates of the inverse of the point $(x'\ y')$ with respect to the circle of radius r.

(*b*) Show that the inverse of a line is a circle through the centre of inversion.

11. In the parabola any line parallel to the axis bisects all chords parallel to the tangent at its extremity.

12. (*a*) Obtain the m-equation of the tangent to an ellipse.

(*b*) Prove that the locus of the point of intersection of two tangents perpendicular to one another is a circle.

13. Show that the equation of the pedal of a Hyperbola with respect to the centre is $(x^2+y^2)^2=a^2x^2-b^2y^2$.

HONOURS.

Synthetic Solid Geometry.

1. (*a*) Find the limiting values of the sums of the face angles, and of the dihedral angles of a 3-faced corner.

(*b*) Show how a spheric triangle is derived from the corner, and apply the limits of (*a*) to the triangle.

2. (*a*) Show that the square on the longest diagonal of any parallelepiped, $abc\lambda\mu\nu$, is

$$a^2+b^2+c^2+2bc\cos\lambda+2ca\cos\mu+2ab\cos\nu.$$

and (*b*) modify this to suit all the diagonals in both classes of parallelepipeds.

3. Pyramids with equal altitudes and equal bases are equal.

4. Show that the prismoidal formula applies to the sphere, and thence find the volume of the sphere.

5. (*a*) State the theorems of Pappus for volumes and surfaces generated by moving figures.

(*b*) A semicircle revolves about a tangent which touches it 3 times as far from one end of the arc as from the other. Show that the volume described is $\pi r^3(\pi-\frac{2}{3}\sqrt{2})$.

6. (*a*) Show how to project a circle so that any given point in its plane may give the centre of the projection.

(*b*) What figures are the projections?

7. The sum of two angles of a spheric triangle and the sum of the two opposite sides are both less than, equal to, or greater than two right angles.

HONOURS.

Algebra. II.

1. Examine the series whose nth term is $x^n(\log n)^q$ as to convergence, deriving the necessary test.

2. (*a*) Find the number of numbers less than a composite number N and prime to it.

(*b*) Find the sum of these numbers.

3. Show that $2\cdot7^n+3\cdot5^n-5$ is a multiple of 24.

4. If a_n is a rational function of n of r dimensions find the scale of relation of $a_0+a_1x+a_2x^2+\ldots$

5. Find the sum of n terms of the series whose nth term is $n2^n/(n+2)!$.

6. The continued fraction whose nth component is b_n/a_n has a definite value if the limit of a_na_{n+1}/b_{n+1}, when $n=\infty$, is greater than zero.

7. The square numbers which are also triangular are the squares of the coefficients of the expansion of $1/(1-6x+x^2)$.

8. If 20 shillings are given to 5 persons, no one receiving fewer than 3, what is the chance that a specified person receives 7?

FINAL HONOURS.

Trigonometry.

1. Establish Demoivre's theorem by any means.

2. Express sin $n\theta$ in terms of the powers of the functions of θ.

3. If C is the chord of a circular arc and c is the chord of one-third of the arc, find a limit to the greatest error when $\frac{1}{8}(9c - C)$ is taken for the length of the arc.

4. Resolve $\frac{1}{x^n+1}$ into its partial fractions.

5. Deduce Wallis' series for $\frac{\pi}{2}$, and show that

$$\sqrt{\pi} = Lt._{n=\infty} \frac{2}{\sqrt{4n+6}} \frac{\lfloor\lfloor 2(n+1)}{\lfloor\lfloor 2n+1}$$

6. Develop $i \sin(\cos\theta) . \sin(i \sin\theta)$ in functions of multiples of θ.

7. Given $\sin\theta = n\cos(\varphi - \theta)$ to develop θ in terms of multiples of φ.

8. (*a*) Find the generating function of

$\cos\theta - \cos 2\theta + 5\cos 3\theta - 13\cos 4\theta + 41\cos 5\theta \ldots$

and $\sin\theta - \sin 2\theta + 5\sin 3\theta - 13\sin 4\theta + 41\sin 5\theta \ldots$

(*b*) Sum to infinity

$$\sin\theta + \frac{\cos\theta \sin\theta}{1} + \frac{\cos^2\theta \sin 2\theta}{2!} + \frac{\cos^3\theta \sin 3\theta}{3!} + \ldots$$

Calculus, I.

(Candidates in Practical Science may omit the last five questions, and Honour Candidates may omit the first four.)

1. State the rule for differentiating an integral power, and show that it applies when the index is fractional.

2. Differentiate the functions (1) $\sqrt{1-x^2}+\sin^{-1}x$, (2) $l.\sin x$, (3) $a^{\log x}$.

3. If a body moves uniformly along a straight line find its angular velocity about a given point; and also its velocity along the radius vector.

4. By integration find the area of a circle.

5. (*a*) Show that the equation of the tangent to a curve at the point xy is

$$X\frac{\partial f}{\partial x}+Y\frac{\partial f}{\partial y}+z\frac{\partial f}{\partial z}=0.$$

(*b*) For the curve $x^{\frac{2}{3}}+y^{\frac{2}{3}}=a^{\frac{2}{3}}$ the portion of tangent intercepted between the axes is constant.

6. In a polar curve show that $\tan\varphi=r\frac{d\theta}{dr}$; and thence show that the curve $r=ca^{\theta}$ cuts all radii vectores at the same angle.

7. (*a*) Investigate the condition for a maximum or a minimum.

(*b*) Find the volume of the largest right cone that can be cut from a given sphere.

8. Deduce the expression $\rho=(1+p^2)^{\frac{3}{2}}/q$ for the radius of curvature of a curve.

9. Find the values of (1) $\int \frac{x^3 dx}{1+x^2}$, (2) $\int \frac{dx}{\sqrt{x^2-x}}$,
(3) $\int \frac{\sin^3\theta}{\cos^4\theta} d\theta$, (4) $\int x^2 \log x \, dx$.

10. Explain how to find the evolute of a curve to cartesian coordinates, and apply your process to the parabola $y^2=2x$.

11. Find the nth differential coefficient of $e^{ax}\sin^3 x$.

12. If $u=\sqrt{1-x^2}\sin^{-1}x$, show that
(i.) $(1-x^2)u_n-(2n-3)xu_{n-1}-(n-1)(n-3)u_{n-2}=0$.
(ii.) $(n+1)a_{n+1}=(n-2)a_{n-1}$.

13. Show that $\sin(l.x+x)=$
$\sin(l.x)+\frac{1}{1}\sin(l.x+\frac{\pi}{2})+\frac{1}{2!}\sin(lx+\frac{2\pi}{2})+\ldots\frac{1}{n!}\sin(lx+\frac{n\pi}{2})$.

14. The area of the curve $y^2=1/(ax-x^2)$ between the limits 0 and a is π.

HONOURS.

Analytic Solid Geometry.

1. One side of a regular tetrahedon is along the x-axis, and another makes equal angles with the y and z axes. Find the equation of the third side which is concurrent with these.

2. Find the equation of a sphere through four arbitrary points; and thence show what fixed relation exists amongst any five points on a sphere.

3. Develope a general equation for a surface of revolution about the z-axis; and apply it to find the equation of the anchor ring.

4. Find the condition that the conicoids $Ax^2+By^2+Cz^2=1$ and $A_1x^2+B_1y^2+C_1z^2=1$ may intersect orthogonally at all common points; and show that the conicoids are confocal.

5. Show that the linear substitution $x=l_1x+l_2y+l_3z$, &c., is sufficient to deprive the general quadric equation of its product terms.

6. Explain any method of finding the equation of the section of a quadric by the plane $lx+my+nz=p$.

7. If r_1 r_2 be the principal radii of curvature, show that $1/r_1+1/r_2$ is constant; and also show how to find the radius of curvature of any other section through the same point.

8. Obtain the equation $(X-x)dx+(Y-y)dy+(Z-z)dz=0$ for a normal plane through x, y, z; and show that a consecutive normal is given by $(X-x)d^2x+(Y-y)d^2y+(Z-z)d^2z=ds^2$.

HONOURS.

Differential Calculus, II.

1. Find dy/dz in terms of y and z from the equations $a\sin x+b\sin y=c$, and $a\cos x+b\cos z=c$.

2. Show how to find the pedal with regard to the origin of any curve (i) whose cartesian equation is given, (ii) whose polar equation is given. Illustrate by finding the pedal of $y^2=4ax$.

3. Explain what is meant by an envelope and show how to find its equation. What are the relations between envelopes and pedal curves?

4. (*a*) Find the maximum number of double points of a curve of the nth degree.

(*b*) Find the double points and points of inflection of $y^2=(1-x)^2x^3$ and the tangents at these points.

5. Determine the condition that a curve should have a parabolic asymptote and find the asymptotes of

$$y^4-2xy^2(x+a)+(x+a)x^3=0.$$

6. Find an expression for the radius of curvature. Apply it to the case of an implicit function and to determine the curvature at the origin.

7. PQ is the common chord of $y^2=4ax$ and its osculating circle at P. Prove that the locus of the foot of the perpendicular from the vertex upon PQ is the cissoid $y^2(3a-x)=x^3$.

Integral Calculus, II.

1. Find the values of

$$(a)\ \int \frac{xe^x dx}{(1+x)^2} \qquad (b)\ \int \frac{dx}{x^4+1} \qquad (c)\ \int \frac{d\theta}{3+\cos\theta}$$

$$(d)\ \int_0^\infty e^{-ax}\sin mx\, dx \qquad (e)\ \int_0^\infty \frac{\sin mx}{x} dx$$

2. Obtain reduction formulae for

(*a*) $\int \sin^m\theta \cos^n\theta d\theta$ [m and n positive.]

(*b*) $\int e^{ax}\sin^n x dx$. [n positive.]

3. Find the differential coefficient of $\int_b^c \varphi(x, a)dx$ with respect to a when b and c are functions of a.

4. If a line segment of constant length connect points on two closed curves, find an expression for the area traced by any point on the segment.

5. Find the lengths of the arcs of (*a*) the catenary $y=c\cosh x/c$, (*b*) the involute of a circle.

6. (*a*) Show that $\iiint dx\, dy\, dz$ expresses the volume of a solid, and show how the limits of integration are determined. Find the corresponding formula for polar co-ordinates.

(*b*) Employ the formula of (*a*) to find the volume of a right cylindrical ungula.

FINAL HONOURS.

Finite Differences.

1. Develope $\Delta^n u_x$; and from it deduce the relation $n!=n^n-{}^nc(n-1)^n+c_2(n-2)^n-+\ldots.$

2. Prove the symbolic theorem $\varphi(t)=\varphi(D)e^{\alpha\cdot t}$

3. Develope the general equation for mechanical quadrature; thence show that if two equidistant ordinates be drawn between the extremes, the quadrature is

$$\tfrac{3}{8}(u_0+3u_1+3u_2+u_3)h.$$

4. Perform the finite integration denoted by $\Sigma(ax+b)^{(m)}$, and apply it to sum the series $4\cdot7+7\cdot10+10.13+\ldots.$

5. Develope the Euler-Maclaurin sum series, and by its means show that

$$-\tfrac{1}{2}\frac{n-1}{n+1}=\sum(-)^r\,{}^nC_{2r-1}\frac{B_{2r-1}}{(2r)!}$$

6. Deduce the relation

$$\sum(-)^x\varphi(o)=\tfrac{1}{2}\{1-\frac{\Delta}{2}+\frac{\Delta^2}{4}-\frac{\Delta^3}{8}+-\ldots\}\varphi(0).$$

Thence find an approximate value for the sum of $\frac{1}{1}+\frac{1}{2}+\frac{1}{3}+\ldots.$

FINAL HONOURS.

Differential Equations.

1. (*a*) Show how to solve the equation $M+N\frac{dy}{dx}=0$ where M and N satisfy the condition for an exact differential.

(*b*) Solve $(1+e^{\frac{x}{y}})dx+e^{\frac{x}{y}}(1-\frac{x}{y})dy=0$.

2. Solve the linear $\frac{dy}{dx}+Py=Q$, where P and Q are functions of x only; and extend the solution to the case where Qy^n takes the place of Q.

3. Solve Clairaut's equation $y=xp+\varphi(p)$; and reduce $y+xp=x^4p^2$ to Clairaut's form.

4. Give a short sketch of a cusp-locus, a tac-locus, and an envelope-locus, stating how they are discriminated analytically.

5. Find the orthogonal trajectory of the parabola $y^2=2mx$ where m is a variable parameter.

6. Prove the theorem

$$f(D)uv=uf(D)v+\frac{Du}{1}f'(D)v+\frac{D^2u}{1\cdot2}f''(D)v+\ldots$$

and give an example of its application.

7. (*a*) Show how to solve the homogeneous equation $x^nD^n+a_1x^{n-1}D^{n-1}+\ldots a_ny=0$.

(*b*) Apply to $x^3D^3-3x^2D^2+7xD-8y=0$.

HONOURS.

Spherical Trigonometry and Astronomy.

1. If $u^2 = 1 - \cos^2\lambda - \cos^2\mu - \cos^2\nu + 2\cos\lambda\cos\mu\cos\nu$, show that the volume of the ppd. $abc\lambda\mu\nu$ is $abcu$.

2. Given $\cos A \sin b \sin c = \cos a - \cos b \cos c$, obtain a logarithmic form for finding A by means of an auxiliary angle.

3. Develope Gauss' theorem

$$\sin\tfrac{1}{2}(A+B)\cos\tfrac{1}{2}c = \cos\tfrac{1}{2}(a-b)\cos\tfrac{1}{2}C;$$

and write the three remaining forms.

4. Develope Napier's forms for finding the remaining angles of a triangle when two sides and the included angle are given.

5. (*a*) Given the latitude of the place of observation, and the altitude and declination for a heavenly body, show how to find its hour angle.

(*b*) If the sun be the body what corrections are necessary in the observation for altitude.

6. In a horizontal dial, θ is the angle with the 12 o'clock line, h is the hour angle, and φ the latitude of the place. Show that $\tan\theta = \tan h \sin\varphi$; and thence construct θ geometrically when φ and h are given.

7. What is the precession of the equinoxes? Give its cause and its observed effects.

8. Explain the perturbations known as the *variation* and the *annular equation* in the moon's motion.

9. Show how to calculate the lunar and solar ecliptic limits.

FINAL HONOURS.

Determinants and Theory of Equations.

1. (*a*) Establish the rules for solving a set of linear simultaneous equations by determinants.

(*b*) If the result of dividing $a_0+a_1x+a_2x^2+\ldots$ by $b_0+b_1x+b_2x^2+\ldots$ is $q_0+q_1x+q_2x^2+\ldots$ express q_n as a determinant.

2. If a determinant vanishes the minors of the elements of one row are proportional to the minors of the elements of any other row.

3. Prove that a skew-symmetric determinant of even degree is a perfect square and express the square root.

4. Eliminate x and y from the equations $2x+y+3a=x^2+2xy-3b=x^2y+c=0$ and expand the resulting determinant.

5. If α, β, γ are the roots of $x^3+px^2+qx+v=0$, express $\Sigma\alpha^3$ and $\Sigma(\beta+\gamma-\alpha)^3$ in terms of p, q, v.

6. Give a trigonometric method of finding the roots of a cubic equation, showing when it applies. Illustrate by solving to six figures the equation $x^3+3x^2-4x+1=0$.

7. (*a*) The derived equation $f'(x)=0$ cannot have more imaginary roots, though it may have more real roots, than $f(x)=0$.

(*b*) If a is a multiple root of order m of $f(x)=0$, it is a root of order $m-1$ of $f'(x)=0$.

(*c*) If $x^5+5p^2x+q=0$ has a pair of equal roots it must also have a second pair.

8. Obtain in any way the reducing cubic of a biquadratic equation.

FINAL HONOURS.

Quaternions.

1. Establish the theorems :—

(*a*) $\beta/\alpha = T\beta/T\alpha(\cos\theta + \varepsilon\sin\theta)$,

(*b*) $(\alpha,\beta)(\beta\alpha) = S^2\alpha\beta - V^2\alpha\beta$,

(*c*) $V.\alpha V\beta\gamma = \gamma S\alpha\beta - \beta S\alpha\gamma$,

(*d*) $T.q = \sqrt{(Sq)^2 + (T.Vq)^2}$, where q is a quaternion.

2. Find the vector equation of a plane through three given points; and also the length of perpendicular from the origin.

3. When two circles intersect, prove that their common chord is perpendicular to the common centre line.

4. Deduce the vector equation for the general conic where the focus is the origin, e is the eccentricity, and α is the vector to the vertex.

5. Assuming the equation $S\rho\varphi\rho = 1$ for the ellipse, prove the theorems of Apollonius.

6. If the asymptotes of a hyperbola be the vectors ω,ω', show that $S\omega\varphi\omega' =$ a constant, and find the nature and meaning of the constant.

7. In the parabola PM is an ordinate and MK is perpendicular to the tangent at P. Show that $MK = T.\{(p-1)2xi + pyi\}$ and find the value of p in terms of a and x.

FINAL HONOURS.

Conics, II.

1. The line $lx+my+n=0$ is a chord of a central conic, to find the equation of its diameter.

2. Find the condition that two conics may have (1) contact of the second order, (2) double contact.

3. Prove that for any point the chord of curvature through the focus is $2b'^2/a$, where b' is the semidiameter parallel to the tangent at the point.

4. (*a*) Find the angle made with the sides of the fundamental triangle by the line $l\alpha+m\beta+n\gamma=0$.

(*b*) Thence indicate how to find the conditions of parallelism and of perpendicularity for the lines $l\alpha+m\beta+n\gamma=0=l'\alpha+m'\beta+n'\gamma$, and state these conditions.

5. If $\lambda\alpha+\mu\beta+\nu\gamma=0$ is tangent to $\frac{l}{\alpha}+\frac{m}{\beta}+\frac{n}{\alpha}=0$, show that $\sqrt{l\lambda}+\sqrt{m\mu}+\sqrt{n\nu}=0$.

6. Show that the radical axis of the circumcircle and the 9-points circle of the fundamental triangle is $\alpha\cos A+\beta\cos B+\gamma\cos C=0$, and that this is also the axis of perspective of the triangle and its pedal triangle.

7. If three conics have each double contact with a fourth, their chords of intersection are concurrent in threes. Thence deduce Brianchon's theorem.

8. (*a*) Deduce the equation $\mu\mu'\alpha-(\mu+\mu')\gamma+\beta=0$ for a chord of $\alpha\beta=\gamma^2$, and examine the cases where $\mu\mu'=$a constant, and where $\mu+\mu'=0$.

(*b*) If a line touches $\alpha\beta p=\gamma^2$ and meets $\alpha\beta=\gamma^2$ at A and B, the locus of intersection of tangents at A and B is the conic $\alpha\beta=p\gamma^2$.

First Honour Physics.

A. Hydrodynamics and Thermodynamics.

1. Determine the total pressure of a liquid at rest, due to weight, on any surface below the free surface of the liquid.

2. The height of mount Fuji in Japan was found to be 12365 feet; the reading of the barometer on the summit was found to be 48 cm., and the temperature 0°; prove that the height of the atmosphere is at least 7·3 miles.

3. Find the mean height of the water-barometer at Queen's (g=980·5) at the temperature of 17°, the density of water at 17° being 0·998794, the pressure of condensing steam at 17° being 1·4421 cm., and the value of g at Paris being 980·94.

4. Define the metacentre of a floating body, and explain how its position determines the stability of equilibrium.

5. A solid cylinder, one end of which is rounded off in the form of a hemisphere, floats with the spherical surface partly immersed; find the greatest height of the cylinder which is consistent with stability of equilibrium.

6. Define the centre of fluid pressure, and find that on a square just immersed in a liquid with one diagonal vertical.

7. Prove that the rise or fall of a liquid in a capillary circular cylindrical tube is inversely proportional to the radius.

8. A bar of metal, $\frac{1}{4}$ square inch in section, can just

withstand a stress of 1000 pounds-weight. A cylindrical vessel is formed of this metal 1 inch thick, and 10 inches internal diameter. If the vessel be placed with its axis vertical, find how much mercury can be poured into it without bursting it.

9. Prove that the superficial energy of a soap bubble is equal to its tension.

10. Explain how temperature is most scientifically measured by the mechanical effects of heat.

11. Explain how Thompson proved that Carnot's thermodynamic function is the reciprocal of the absolute temperature.

12. Hence determine the efficiency of a perfect engine in terms of the temperatures of the boiler and condenser.

13. Express by means of an indicator-diagram the specific heat of a substance at constant volume, and its elasticity at constant quantity of heat.

14. Prove from Thermodynamics that the freezing point of water is lowered by pressure, and calculate by how much per atmosphere.

First Honour Physics.

B. Stereodynamics and Electrodynamics.

1. Find the static advantage of a rope wound round a cylinder in a plane normal to the axis in terms of the length of the rope, the radius of the cylinder, and the coefficient of friction. If the coefficient of friction be 0·3, and a man can exert a force of 100 pounds-weight, what force could he balance with $2\frac{1}{2}$ turns of the rope?

2. Find at what latitude the tendency of a body to move towards the equator, on account of the earth's rotation, is greatest. Hence, supposing the earth to be a sphere of uniform density, find what would be the greatest deviation of a plumb-line from the direction of the earth's centre on account of the earth's rotation.

3. Find the time of oscillation of a simple pendulum. Hence find the number of oscillations made in 10 minutes by a simple pendulum 30 feet long, at Kingston.

4. A particle projected with a speed of 200 vels at an inclination of $\frac{1}{3}\pi$ to the horizon just clears a wall which subtends an angle of $\frac{1}{6}$ radian at the point of projection; find the instant at which the particle clears the wall, and distance from the wall at which it reaches the ground.

5. A, B, C are three particles having masses m, $4m$, and m grams respectively, and are connected by two inextensible strings AB and CB, so as to form an isosceles triangle having B a right angle. If B receive an impulse of $4\ m\ v$ gramtachs, normal to AC in the plane ABC, find the impulsive tensions of the strings and the initial velocities of the three particles.

6. Jupiter's mean distance from the sun is about

$4{\cdot}8\times10^8$ miles, and its period 4332·6 days; determine the sun's mass. Take $G=1{\cdot}04\times10^{-9}$ poundal.

7. A simple pendulum is made to swing in a cycloid; find the time of oscillation and the hodograph of motion.

8. A right circular cylindrical shell of uniform density is placed with its axis horizontal on a plane inclined to the horizon at an angle of 30°. The inner and outer radii are a and b cm. respectively. How long would it take to roll through 10 metres? What is the greatest value of the inclination of the plane for which no sliding takes place?

9. Enunciate Gauss's theorem of total normal electric induction, and apply it to prove Coulomb's law of the intensity at a point close to the surface of an electrified conductor in terms of the electric density at that point.

10. Prove that the electric intensity at any point inside a closed equipotential surface is zero when no electric charge is enclosed. State a case in which the same result applies to gravitation, and explain why the resultant gravitation on a particle within a hollow body is not always zero.

11. Given the charges and potentials of any number of conductors in an electric field, to determine the potential energy of the field.

12. Determine the mechanical stress per unit of area at any point of the surface of a charged conductor in terms of the electric density at that point.

13 Define a tube of force and prove that the intensity at any point of an electric field varies as the number of Faraday tubes of force which pass through unit of area of the equipotential surface through the point.

14. Determine the energy per unit of volume at any point of an electric field in terms of the electric intensity at the point.

PASS.

Botany.

FIRST PAPER.

Morphology and Physiology.

1. The foliage leaves of a plant are specially adapted to the plant's relation to light. Show how this is proved by (*a*) their position, (*b*) colour, (*c*) amount of surface, and (*d*) movements.

2. Write notes on the following functions of foliage leaves:—(*a*) Photosynthesis, (*b*) transpiration, and (*c*) respiration.

3. Explain how five forms of indefinite inflorescence may be derived from the Raceme.

4. How do botanists prove that all the parts of the flower are only modified leaves?

5. Explain the following modifications of the flower, giving examples of each:—(*a*) Coalescence, (*b*) adnation, and (*c*) irregularity.

6. Describe two ways in which dichogamy may occur and state its advantages.

PRELIMINARY HONOURS.

Botany.

First ~~SECOND~~ PAPER.

Morphology, Physiology, Ecology.

1. Mention the three principal Tissue-systems and describe one of them.

2. Leaves often serve at the same time both their ordinary and some special use. Mention four of these uses, giving an example of each.

3. What are the uses of (1) the root, (2) the stem, (3) the leaves, and (4) the stamens?

4. Describe the process by which a leaf-stoma is formed.

5. How is plant food obtained and how is it transported in the plant?

6. State three ways in which the equilibrium of the water in the plant is disturbed.

7. What relation exists between light and assimilation in plants?

8. Mention any four of the principal ecological factors which act upon any common tree, and explain how any three of these affect it.

9. Describe any two forms of plant symbiosis.

10. Plants are sometimes divided into (1) Mesophytes, (2) Xerophytes, (3) Halophytes, and (4) Hydrophytes. What are the special conditions to which each of these is adapted?

PRELIMINARY HONOURS.

Botany.

SECOND PAPER.

Practical Botany.

1. Make a list of the plants in the bundle submitted, giving (1) the ordinal, (2) the generic, and (3) the specific name.

2. Select from the bundle one plant of each of the following orders and describe it as fully as you can :—

1. Cruciferæ.
2. Compositæ.
3. Labiatæ.
4. Liliaceæ.

3. What plants in the bundle have the following forms of Inflorescence? (1) Raceme, (2) Corymb, (3) Umbel, (4) Glomerule.

4. What plants have the following fruits? (1) Pod, (2) Berry, (3) Silique.

FINAL HONOURS.

Botany.

FIRST PAPER.

Morphology and Histology.

1. "Two kinds of symmetry may be distinguished: the multilateral, including the radial; and the bilateral, including the isobilateral and the zygomorphic." Explain these, giving examples of each.

2. Write notes on the two modes of Reproduction.

3. Describe the general morphology of the male gametes of (1) isogamous, and (2) heterogamous plants.

4. "In a fully developed living cell the following three principal constitutents may be distinguished:—(1) The cell-wall, (2) the protoplasm, (3) the vacuoles." Describe each of these.

5. Describe any two of the following kinds of growing points:—(1) Those consisting of small-celled meristem, (2) those with a simple apical cell, (3) those with a group of common initial cells.

6. Explain Sanio's law of cambial division.

7. Explain the structure and use of lenticels.

8. When the stem of a tree is injured, as by cutting off a branch, how is the wound healed?

FINAL HONOURS.

Botany.

SECOND PAPER.

Physiology.

1. "There are two sets of chemical processes continually and simultaneously going on in living protoplasm, which together constitute the metabolism of the plant." Explain these two and show how they affect the energy of the plant.

2. How is the function of absorption in living plants affected by the presence of the protoplasm in the cells?

3. How can root-pressure be ascertained, and how is it accounted for?

4. Plants are irritable to the directive influence of gravity. Explain how this is demonstrated by Knight's machine.

5. "The most remarkable case of the combined effects of different *stimuli* is afforded by the growth of twining stems." Explain this statement.

6. What difficulties are experienced in explaining the phenomena of heredity?

FINAL HONOURS.

Botany—Second Year.

THIRD PAPER.

Practical Work.

A.

1. Make a list of the Cryptogamia submitted, giving (1) ordinal, (2) generic, and (3) specific names.

2. Select from the specimens in bottles, (1) one fresh water Alga, (2) one Fungus, and from the dried specimens (3) one Moss, and give an outline of their life history, describing (1) the gametophyte, (2) the sporophyte and (3) the mode of fertilization.

B.

3. Make a list of the Pteridophyta and Phanerogamia in the bundle submitted, giving their names as above.

4. Select one Fern, one Equisetum and one Lycopod and describe (1) its general histology, (2) its mode of reproduction.

5. Select one Grass, one Carex, and one Scirpus, and describe (1) its flowers, and (2) mode of pollination.

PRELIMINARY AND FINAL HONOURS.

Invertebrate Morphology

1. Identify and draw, or otherwise describe the specimen submitted.

2. Distinguish between male and female astacus, especially differences in their abdominal appendages.

3. Sketch the mid-dorsal dissection of the first twenty segments of lumbricus, after removal of the alimentary canal.

4. Describe the eye in astacus as seen in median longitudinal section. Describe also the eye of loligo.

PRELIMINARY AND FINAL HONOURS.

General Biology.

1. Compare a radiolarian with an infuser.

2. Classify the cnidaria, and describe the order hydromudusæ.

3. Describe the anatomy of the barnacles. Also of a planarian worm, or bugula.

4. Explain and illustrate what is meant by dimorphism and polymorphism.

5. Outline the arguments against Wisemann's view of heredity.

PRELIMINARY HONOURS.

Physiology.

1. Give examples of the two kinds of vaso-motor actions in a mammal.

2. Explain why a pulse is sometimes seen in the jugular vein of the neck.

3. Give reasons for considering that the diet of man is naturally a mixed diet.

4. What experiments demonstrate that urea is formed in the liver?

5. What are the effects of lack of oxygen upon important nerve centres in the medulla? Specify the centres.

6. Explain and illustrate what is meant by localization of function in the brain.

7. Specify the different causes of blindness.

FINAL HONOURS.

Physiology.

1. Describe the muscular and nervous mechanisms for movements of the eyeballs. For defæcation.

2. Discuss the physiology of the muscular sense.

3. What tissues oxidize most rapidly ? What circumstances modify the rate of oxidation.

4. Describe the nervous mechanism for the secretion of sweat.

5. Specify the functions that have been attributed to the spleen. What chemical substances have been obtained from it ?

6. Discuss the effects of feeding proteids to a starved animal.

7. What circumstances vary the production and loss of heat ?

PRELIMINARY HONOURS.

Histology.

1. Describe the different kinds of muscle tissue.

2. Sketch the histology of a salivary gland.

3. Draw a diagram showing the structure of the trachea in cross-section.

4. Describe the cells and terminal nerve fibres of the olfactory region of the anterior nares.

FINAL HONOURS.

Histology.

1. Sketch in a comparative way the distribution of lymph-adenoid tissue along the alimentary tract.

2. Compare the following structures:—

(*a*) Tonsil and lymphatic follicle.

(*b*) Brunner's glands and œsophageal glands.

3. Name the layers of the skin and the structures found in each.

4. Draw, describe, and identify the three specimens submitted.

Queen's University Examinations: April, 1901.

FACULTY OF ARTS (HONOURS)
AND FACULTY OF PRACTICAL SCIENCE.

Organic Chemistry.

1. From the following analytical data calculate the formula of the compound, assuming it to contain one bromine atom to the molecule:

0·2061 gramme of the substance gave on combustion 0·2910 g. CO_2 and 0·0602 g. H_2O.

0·1926 g. gave 12·4 c.c. nitrogen measured at 20° and 740 m.m. pressure.

0·2214 g. gave by Carius' method for bromine 0·1028 g. silver bromide. [C=12, O=16, N=14, Ag=108, Br=80.]

2. Describe three ways of making sulphonic acids, and discuss the bearing of each on the chemical constitution of these compounds.

3. (*a*) How can pyridine be synthesised?

(*b*) What is its relation to nicotinic acid? Show by graphic formulas.

4. Describe carefully and completely the products of the action of ammonia on ethyl bromide.

5. Compare the action of carbon dioxide on dry ammonia gas with the action of carbon disulphide on ethylamine.

6. Write an account of the cacodyl compounds and compare them with similar phosphorus compounds.

7. Discuss the basic organic hydroxides.

8. Describe one way of ascending the $C_nH_{2n+1}OH$ series of alcohols, and one way of descending the fatty acid series.

HONOURS.

Physiological Chemistry.

1. (*a*) To what is the alkalinity of the blood due? (*b*) What is the probable explanation of the secretion of free acid from the blood by the gastric glands?

2. Discuss the chemical action of ptyalin on starch, noting particularly the properties of the products.

3. Describe the properties of hæmoglobin, and name the compounds which it forms with gases.

4. (*a*) What phosphates are present in urine? (*b*) Account for the precipitation of phosphates when urine becomes neutral or alkaline.

5. (*a*) What is the constitution of hippurie acid? (*b*) Account for the excessive excretion of hippurie acid when benzoic acid is taken with the food.

6. Discuss *the formation of bases* (*ammonia, &c.,*) *by fermentation.*

7. Define *ptomaïnes* and *leucomaïnes,* and write graphic formulas for *cadaverine, putrescine,* and *choline.*

FACULTY OF ARTS (HONOURS)
AND FACULTY OF PRACTICAL SCIENCE.

Physical Chemistry.

(N.B.—Not more than *eight* questions to be attempted.)

1. If 10 grammes of nitrogen are allowed to flow into an exhausted vessel of 10 litres volume surrounded by ice and water, how much ice would be melted by the heat produced?

2. Discuss the solubility of partially miscible liquids, *or* the distillation of mixtures of volatile liquids.

3. Explain *fully* what is meant by the cryohydric point.

4. In the case of most gases, the value pv is not actually a constant, but diminishes till it reaches a minimum, and afterwards increases. Explain this phenomenon and give the equation representing it.

5. What is the phase rule? Illustrate by sulphur or ferric chloride.

6. How can the heat of formation of a hydrocarbon such as benzene be calculated?

7. Discuss the relation of chemical constitution and physical properties.

8. The vapour pressure of a dilute solution of calcium chloride bears a constant ratio to the vapour pressure of the solvent indepeudently of the temperature. Prove this statement mathematically from the gas laws applied to the vapour of the solvent and to the solute in dilute solution.

9. Discuss electrolytic dissociation.

10. What is meant by migration of the ions? How is it measured?

11. Give a general description of balanced actions *or* deduce the formula for the rate of a unimolecular transformation.

HONOURS.

Chemistry.

Crystallography.

1. Explain what is meant by (*a*) limiting form, (*b*) symmetrical truncation, (*c*) bevelment.

2. Using sketches, show how the faces of the rhombic dodecahedron, the octahedron, and the trisoctahedron respectively, modify the cube.

3. Sketch one octant of the hexoctahedron, and show how the planes are selected in the 3 kinds of hemihedrism in the isometric system.

4. Using an example, explain what is meant by a *contact twin*.

5. Give with Naumann's symbols the simple forms of the hexagonal system.

6. Using the principles of symmetry, show the least number of planes constituting a complete form in the orthorhombic, monoclinic and triclinic systems respectively.

HONOURS.

Chemistry.

Qualitative Analysis.

1. Describe, using formulae and equations, all the reactions which may take place when the sulphides of group II. insoluble in yellow ammonium sulphide, are treated with nitric acid.

2. In testing for cadmium a *black* precipitate is obtained when H_2S is added after treating with KCN. What may this be? How would you test it for cadmium?

3. (*a*) What is the composition (formula) of the precipitate obtained in testing for arsenic acid with magnesia mixture? (*b*) How would you treat a solution to ascertain if it contained both an arsenate and a phosphate?

4. (*a*) Why is ferric chloride added in the analysis of solutions containing phosphates of the alkaline earths? (*b*) What test shows when enough ferric chloride is present? (*c*) What metals are precipitated from such a solution by adding barium carbonate? (*d*) Write the equation for one case of (*c*).

5. In testing for chromium, how would you proceed if the fusion with sodium carbonate were green? Explain.

6. (*a*) Upon what does the separation of calcium, strontrium, and barium by the ether-alcohol method depend? (*b*) Write equations for the reactions involved, starting with the precipitation by ammonium carbonate.

FACULTY OF ARTS (HONOURS)
AND FACULTY OF PRACTICAL SCIENCE.

Technical Chemistry.

(N.B.—Not more than nine questions to be attempted.)

1. Describe the process which goes on in the lead chambers, *or* discuss the contact processes for the manufacture of sulphuric acid, showing what difficulties had to be overcome and how this has been effected.

2. Describe a process of obtaining common salt from from sea water, *or* from brines. How is salt cake produced?

3. Describe the Weldon process for the recovery of chlorine from manganese chloride, *or* the Weldon-Pechiney process for obtaining chlorine from magnesiun chloride.

4. How is pure ammonia solution obtained from gas liquor?

5. Describe some electrolytic method for obtaining caustic soda, giving its advantages and disadvantages.

6. Describe a process of treating garbage for producing fertilisers, *or* the method of production of phosphate slag and its subsequent treatment.

7. Describe the character of drying oils and the treatment to which they are subjected.

8. Give the comparative merits and defects of the soda and the bisulphite process for wood pulp, *or* describe the action of the beating engine (hollander).

9. Discuss the conditions of soil, climate, &c., suitable for sugar beet growth, *or* give a synopsis of raw sugar making from the sugar cane.

10. What chemical advances have enabled beet sugar to compete with cane sugar?

HONOURS.

History of Chemistry.

1. (*a*) How did the idea of the valency of the elements originate? (*b*) Discuss the controversy about *fixed* and *variable* valency.

2. Give the history of Avogadro's hypothesis, from its publication by its author to the time of its modern application to the determination of molecular and atomic weights.

3. Outline the history of electrochemistry and electrometallurgy.

4. Give a statement of Berthollet's theory of chemical change.

5. Write an account of the investigations and speculations which led up to the discovery of the Periodic law.

6. Write notes on the contributions of (*a*) Guy Lussac and (*b*) Dumas to chemical science.

PRELIMINARY HONOURS.

Mineralogy.

Systematic Mineralogy.

1. "The outward form of a crystal is an expression of a definite internal molecular arrangement." Explain this statement.

2. Using diagrams, show what phenomena may appear in the field of the microscope when different basal sections of quartz crystals are examined between crossed nicols in parallel and convergent polarized light.

3. Given oriented sections of anhydrite for the pinacoidal, prismatic and domatic zones, describe the appearance of these sections between crossed nicols in parallel and convergent polarized light, and give Naumann's symbols for each section as described.

4. Explain what is meant by *positive* and *negative* uniaxial crystals, and show how this difference is determined.

5. The following crystals may resemble one another very closely in form: (1) the cube of fluorite, (2) the combination of prism and pinacoid of scapolite, (3) the combination of the three pinacoids of topaz, (3) the rhombohedron of chabazite. How would you distinguish?

6. Using the mineral chalcanthite (copper sulphate) as an example, explain what is meant by *electro-positive* and *electro-negative* elements.

7. Explain what is meant by the *curve of hardness* for the mineral fluorite. How is it obtained?

HONOURS.

Mineralogy.

Crystallography.

1. Describe with an example in each case, the twinning laws of the monoclinic system.

2. Give, with the symbols of Weiss and Naumann in each case, the names of the forms present on the models submitted.

3. With the materials supplied, set up the crystal lettered x, and give Miller's symbols for the forms present.

4. Sketch the front upper right-hand octant of *mOm* and letter the faces, using *h*, *k* and *l* according to Miller, and show how distortion may affect this form.

5. Explain what is meant by *parallel grouping* and distinguish carefully between that and *twinning.*

6. Show how the forms in one system may become limiting forms for another system lower in grade of symmetry.

7. Using examples, discuss the changes in the forms of *isomorphous mixtures.*

FACULTY OF ARTS (HONOURS)
AND FACULTY OF PRACTICAL SCIENCE.

Quantitative Analysis and Assaying.

1. Give details of precipitation, filtering, washing and ignition in the estimation of magnesia.

2. (*a*) Write equations for the precipitation of a solution of potassium chloride by platinum tetrachloride, and for the decomposition of the precipitate by ignition.

(*b*) Why is alcohol used in the precipitation?

3. Write equations for the following :—

(*a*) Action of chloride of lime on arsenic trioxide.

(*b*) Action of chloride of lime on potassium iodide.

4. (*a*) Give details for the separation of phosphoric acid in the determination of sodium in sodium phosphate.

(*b*) Write the formula of the precipitate.

Assaying.

1. An ore sample containing pyrite and chalcopyrite in a gangue of barite is handed you for assay for gold. State in detail how you would treat it. Give reasons for such treatment and show what would be the result if the details were neglected.

2. In the scorification assay for silver, where would the presence of the following elements in the ore appear in the process and what would be the effect in each case on the result of the assay, (*a*) zinc, (*b*) antimony, (*c*) tellurium, (*d*) bismuth, (*e*) platinum?

3. In determining percentage of iron in an iron ore,

(*a*) when reducing with tin chloride solution, the ore solution becomes turbid ; explain the cause of this.

(*b*) on adding mercuric chloride solution, the liquid becomes black ; explain the cause.

(*c*) why does the assayer add manganese sulphate and sulphuric acid to the ore solution before titrating ?

4. Assuming numbers and weights, show how you would standardize the ferrocyanide solution for the volumetric assay for zinc.

5. A sample of galena is suspected to contain a small quantity of silver ; give in detail the method of treatment to ascertain the silver percentage.

FINAL HONOURS.

Geology.

1. What methods have been employed for determining the density of the earth?

2. Mention some of the theories which have been proposed in explanation of the alternations of climate.

3. Describe the three leading types of mountains.

4. What observations have been made concerning the successive discharges of volcanic rocks in different regions?

5. Give an account of some of the experiments which have been made in connection with the artificial production of igneous rocks.

6. Write notes on the effects of compression on rocks.

7. Describe, by means of diagrams, the following terms:—Trachytic structure, granophyric, quâ-quâ-versal, thrust plane, segregation vein.

8. Write brief notes on the geological work of each of the following:—Bunsen, J. D. Dana, von Humboldt, Sedgwick.

FACULTIES OF ARTS AND PRACTICAL SCIENCE.

Geology of Canada.

1. Give an account of the classifications which have been proposed for the Archæan rocks of Ontario.

2. Describe the distribution of the Potsdam, Utica, and Hamilton formations in Ontario. Name the characteristic fossils of each formation.

3. Write notes on the coal-bearing areas of the Dominion.

4. State the modes of occurrence of the following materials in Canada and name the districts of which each is characteristic:— Asbestus, graphite, hematite, amber mica and platinum.

5. Write notes on the "Quebec group."

6. Give a description of the post-Cainozoic deposits of Ontario.

7. Write notes on the volcanic rocks of any district in southern British Columbia.

8. "We find the Devonian rocks of New York, Pennsylvania and the interior represented in New Brunswick and Nova Scotia by a totally different series of deposits." State fully what this difference is and how it is accounted for.

FACULTIES OF ARTS AND PRACTICAL SCIENCE.

Economic Geology.

1. Write notes on the modes of occurrence of the ores of manganese, chromium, mercury, molybdenum, and bismuth found in Canada. State what uses are made of each of these metals.

2. Deposits of certain ores can be located by means of instruments susceptible to magnetic attraction. Give a list of such ores.

3. Draw up a list of Canadian minerals adapted to use as decorative materials.

4. For what purposes are limestones employed in the arts? State the character of the limestone used for each purpose mentioned by you.

5. Name the economic minerals found in placer deposits.

6. What are the characteristic silver ores of British Columbia and Ontario respectively?

7. Certain ore deposits are supposed to originate through "replacement." Explain clearly what is meant by this and give examples of such deposits.

8. Give a list of materials used for refractory purposes and write notes on the origin of each substance mentioned by you.

9. What by-products are obtained in refining Canadian gold ores?

FACULTIES OF ARTS AND PRACTICAL SCIENCE.

Petrography.

1. Give the microscopic characteristics of the more commonly occurring monoclinic and orthorhombic pyroxenes. Name rocks in which each variety referred to by you occurs.

2. State with what minerals each of the following is sometimes confused when examined in thin sections under the microscope—orthoclase, olivine, muscovite, biotite. Show how they can be identified.

3. Draw up a list of four igneous rocks which contain a comparatively high percentage of magnesia. Why would you suspect the presence of (1) nepheline (2) leucite in rocks from the results of complete analyses?

4. Write notes on the origin of mica schists.

5. What crystalline schists may result from the metamorphism of diorite and gabbro?

6. Explain the terms pegmitite and granophyric.

7. Give a list of five economic minerals which occur as original constitutents of igneous rocks.

8. Characterize andesite, diabase, and alnöite.

9. Name the specimens labelled A, B, C, D, E, F respectively.

10. Describe by means of the microscope the three sections labelled K, L, M, O.

PRELIMINARY AND FINAL HONOURS.

Palaeontology.

1. Trace the development of the Crustacea and the Cephalopoda through Palæozoic and Mesozoic times.

2. Write notes on the plant life of the Devonian and Carboniferous periods.

3. "For the purpose of the geologist, fossil remains of marine forms of life far surpass all others in value." Illustrate the truth of this statement.

4. What evidence have we that, from early geological times, the present great areas of land and sea have remained on the whole where they are?

5. Explain the following terms:—Homotaxis, "natural selection," "doctrine of colonies."

6. Why was the term Ordovician introduced?

7. State the characters, in a general way, of the Old Red Sandstone deposits.

8. Write notes on the Permian system of North America.

9. Give a brief account of the mammalian forms which made their appearance in the Eocene period.

10. What are the chief characteristics of Palæolithic and Neolithic deposits respectively?

PRACTICAL SCIENCE PAPERS.

For Papers in

Junior and Senior English,
" " Mathematics,
" " Chemistry,
" " Physics,
Elementary Mineralogy and Blowpipe Analysis,
Pass Geology,

See Arts Pass Papers.

For Papers in

Conics, I.,
Calculus, I.,
Physical Chemistry,
Technical Chemistry,
Quantitative Analysis and Assaying,
Geology of Canada,
Economic Geology,
Petrography,

See Arts Honour Papers.

PRACTICAL SCIENCE.

Spherical Trigonometry.

1. (*a*) Prove that the area of a triangle on the surface of a sphere is equal to the square of the radius multiplied by the spherical excess.

(*b*) A spherical triangle on a sphere of 100 ft. radius has three angles each 70°, to find its area.

2. Assuming $\cos a = \cos b \cos c + \sin b \sin c \cos A$., prove (*a*) $\sin A = \frac{1}{\sin b \sin c} \sqrt{\{1 - \cos^2 a - \cos^2 b - \cos^2 c + 2 \cos a \cos b \cos c\}}$.

(*b*) $\text{Sin } A = \frac{2}{\sin b \sin c} \sqrt{\{\sin s \sin (s-a) \sin (s-b) \sin (s-c)\}}$.

(*c*) $\text{Cos } \frac{A}{2} = \sqrt{\left\{\frac{\sin s \sin (s-a)}{\sin b \sin c}\right\}}$

3. (*a*) State the rule called "Napier's Circular parts."

(*b*) Employ Napier's circular parts to find the remaining parts when two angles are given as 50° and 75°, and the side between them is 60°.

4. In latitude 44°12′N when the sun's declination is 15° north, find (*a*) the length of the day from sunrise to sunset. (*b*) The number of degrees north of east at which the sun rises.

PRACTICAL SCIENCE.

Descriptive Astromony.

1. What is a constellation? Name any three constellations not in the zodiac.

2. The sun's bulk is 1,250,000 times that of the earth, and his weight only about 300,000 times that of the earth. Give any explanation of this fact.

3. What is the corona and what is the chromosphere, and when and where can they be seen?

4. Describe the changes which take place in the telescopic appearances of Venus during her revolution about the sun.

5. (*a*) Define the circles known as (1) the ecliptic, (2) the celestial equator.

(*b*) Which of these undergo changes, and what are these changes?

6. Explain the causes of the seasons.

7. Given that the moon goes around the earth in 27.32 days, and the earth around the sun in 365.25 days, find the length of a lunation.

8. Explain how there may be only two eclipses in a year, and how there may be seven; and in each case give the characters of the eclipses.

PASS.

Mineralogy.

Systematic.

1. Give with Naumann's symbols the members of the pyramidal and domatic series respectively in the monoclinic system.

2. A quantitative analysis of a mineral gave the following results:—Alumina=21·70 p.c., ferric oxide=trace, ferrous oxide=30·82 p. c., silica=39·29 p. c., lime=1·99 p. c., magnesia=5·26 p. c., manganous oxide=1·51 p. c. Calculate the formula of the mineral, taking the atomic weights of the elements as follows:—Al=27, Si=28, Fe=55·9, O=16, Mn=54·8, Mg=24, Ca=39·9.

3. A basal section and a longitudinal section of the mineral tourmaline are examined under the petrographical microscope. Describe the phenomena in both cases (*a*) in parallel polarized light, (*b*) in convergent polarized light.

4. Show how the Röntgen-rays may be applied in the study of mineralogy.

5. Classify crystals with regard to thermal conductivity.

6. (*a*) *Axial plane*, (*b*) *axial angle.* Explain these terms and show their use in the study of mineralogy.

PASS.

Mineralogy.

Descriptive and Determinative.

1. Discuss (*a*) the composition of the members of the *hornblende* group.

(*b*) The crystallography of the members of the *scapolite* group, using Naumann's symbols.

2. Give, with composition, the members of the *pyrite* group.

3. Sketch a typical crystal of *gypsum* and indicate the cleavage directions, giving Naumann's symbols.

4. Distinguish carefully by blowpipe and reagents,

(*a*) Talc and kaolin.

(*b*) Ilmenite and wolframite.

(*c*) Ullmannite and arsenopyrite.

(*d*) Zincite and zinkenite.

5. Give, with composition, the prominent minerals containing copper, and place each mineral mentioned in its proper position in Dana's system of classification.

6. Describe the following mineral species :—

(*a*) Sphalerite, (*b*) leucite, (*c*) spinel.

7. Give qualitative method for quickly obtaining idea of chemical composition of a silicate contained in a rock mass.

FINAL HONOURS.

Mineralogy.

Descriptive and Determinative.

1. Discuss *arsenic* as a mineral-forming element.

2. Describe in detail the twinning of calcite.

3. Taking the minerals of the chrysolite group as examples, discuss *isomorphous mixtures.*

4. Sketch an outline (*a*) of a basal section, (*b*) of a clinopinacoidal section of an orthoclase crystal and describe the phenomena that such sections would present under the petrographical microscope in parallel and convergent polarized light.

5. In the description of the mineral tremolite the following appear:—Extinction-angle $\mathfrak{c} \wedge \mathfrak{c} = +16$, $\mathrm{B}x_a \wedge \mathrm{c} = -74°$ to $-72°$, $2\mathrm{V}_y = 80°$, ${}_i\beta_y = 1{\cdot}621$. Using sketches, explain carefully what these terms mean and show in each case how they are obtained.

6. Discuss the composition of the members of the garnet group and show the relation of these to the members of the sodalite group.

FACULTY OF PRACTICAL SCIENCE.

Mining—Third Year.

1. Explain the general method of prospecting an exposed placer deposit of large extent.

2. With the aid of sketches, explain the action of any rock drill valve with which you are familiar.

3. Give the average composition of a 40 p.c. dynamite, and state what tests should be made in the inspection of such material to ascertain if it be in good condition.

4. For a line of least resistance of 2 ft. 6 ins., with a hole 2 ins. in diameter, using 40 p.c. dynamite, calculate the proper depth hole for blasting when there is but one free face.

5. In sinking a vertical shaft with a cross section 7 ft. by 16 ft. in hard schist, dipping 60° from the horizontal, show by diagram the number and positions of bore holes necessary for one cut in blasting, with the order of firing indicated.

6. Describe in detail the method of winning ore from a vein 8 ft. wide by overhand stoping, including the blocking out of the ore body and providing air to the workings.

7. Show how the method of stoping may be applied to wide ore bodies, varying from 25 ft. to 40 ft., the ore and the walls being hard and firm.

8. Explain, and illustrate with diagrams, the pillar and stall method of mining horizontal deposits of moderate thickness, applying the double entry and panel system.

9. Explain the longwall retreating system of mining horizontal deposits, state its limitations, and show how to control the thrust of the roof.

10. State the chief considerations to be taken into account in locating a permanent shaft to work a vein dipping 84°, and outline the preliminary steps and arrangements necessary before active sinking may begin.

FACULTY OF PRACTICAL SCIENCE.

Mining—Fourth Year.

1. Calculate the diameters of steam and water cylinders suitable for a duplex direct-acting pump that will discharge 1,600 gallons per minute from a sump 300 ft. below the delivery at the shaft mouth, taking steam at a pressure of 80 lbs. per square inch.

2. If with a water guage of 2 inches 135,000 cu. ft. of air is circulating in a mine, what volume of air would be passed if the water guage should read 1.64 inches?

3. An airway 8 ft. by 12 ft. and 4,000 ft. long is passing 28,800 cu. ft. of air per minute. What is the rubbing surface, pressure, and horse-power?

4. Calculate the size of a duplex second motion engine geared 1 to 3, ratio of length of stroke to diameter of cylinder being 1.25, to hoist 1,000 tons per diem of 8 hrs., from a two-compartment shaft, 800 ft. deep. The cages weigh 2,200 lbs., the cars 1,400 lbs., and the load of a car 2,000. Allow $\frac{1}{10}$ of the total moving load for friction, estimate the engine as yielding 60 per cent. efficiency, the engine cut off at $\frac{2}{3}$ of the stroke, and the boiler pressure 90 lbs. per sq. in. No balance rope to be used.

5. Calculate the size of rope required to lower 1,000 tons a day of 10 hours, on a gravity plane 900 feet long, the upper landing being 50 ft. higher than the lower end of the road. Calculate stopping and starting grades at the head and foot of the incline, and also the grade of the incline. Assume a rolling friction $\frac{1}{40}$ of the normal

pressure on the plane. The cars weigh 1,500 lbs., and have a capacity of 2,200 lbs.

6. Describe the square set method of timbering, and explain, with the aid of a sketch, how the placing of sets proceeds with the progress of mining in overhand stoping.

7. Show by sketches two methods suitable for sustaining a gangway on supported stulls in a vein dipping 60°, and 14 ft. wide between walls.

8. Describe the main and tail rope system of haulage, and show how it may be applied to branches from the main gangway, operated by the same power plant.

9. Outline the Cornish system (both self balanced and counterpoised) of pumping, showing in detail, with the aid of sketches, the arrangements for operating a plunger pump at one of the water stations in a vertical shaft.

10. (*a*) Explain what is meant by head of air column.

(*b*) Describe the water gauge and explain its use in connection with mine ventilation.

NOTE—The answers to the first five of the above questions count 15 each, and the answers to the last five count 5 each.

FACULTY OF PRACTICAL SCIENCE.

Ore Dressing—Third Year.

1. Give a classification of crushing machines based upon the manner in which the crushing force is applied to the ore particles in each class.

2. What horsepower will be required to run a 5-stamp mill, with 850 lb. stamps, making 92 drops per minute, dropping 7 inches.

3. State the five principal adjustments of a modern stamp mill, the weight of stamps remaining fixed; and explain the effect of each adjustment upon the fineness of product resulting in ore crushing.

4. State fully the relative advantages and disadvantages of end-percussion and gyratory screens.

5. For the falling velocity of bodies in water, having given

$$\text{Acceleration} = \frac{\text{Motive Force.}}{\text{Mass.}}$$

$$\text{Weight} = \tfrac{1}{6}\pi d^3(\delta - 1)\gamma.$$

$$\text{Resistance} = \tfrac{1}{2}\frac{\pi d^2}{4}\frac{V^2}{2g}\gamma.$$

$$\text{Mass} = \tfrac{1}{6}\frac{\pi d^3 \delta \gamma}{g}.$$

derive the formula

$$V = c\sqrt{d(\delta - 1)}$$

giving to c its value.

6. From the formula $V = c\sqrt{d(\delta - 1)}$ compute the

ratio of diameters of equal settling particles of quartz and galena. Sp. G. of quartz=2.6, and of Galena=7.5. Assign a proper value to *c*.

7. Having a mixture of crushed quartz and galena, sized through a No. 10 mesh screen (1.85 m.m. openings), calculate the velocity of rising current theoretically requisite for classification of ore for jigging, in the first and second compartments in a theroetically perfect hydraulic classifier.

8. Give the four laws of jigging.

9. Describe the Wilfley (riffle washer) concentrator, and explain the principles upon which concentration is effected on a machine of this type.

10. What is the principle upon which concentration depends in the treatment of pulp on buddles? Show how hydraulic classification of the pulp facilitates a perfect separation of the light from the heavy minerals in this case.

FACULTY OF PRACTICAL SCIENCE.

Metallurgy—Third Year.

1. Interpret the two following formulae for the calorific power of solid fuels :—

(1) $Q=3000(2.67C+1.5\times 8H)-555(W+W'+9H)$.

(2) $Q=\frac{1}{100}(8080C+34500(H-\frac{O}{8})$.

2. Describe the Thompson calorimeter, explain the method of using it, and give the relation between the gramme calorie and the British thermal unit.

4. State fully the conditions requisite for a blast furnace fuel, and discuss the relative merits of coke, charcoal, and anthracite, for this purpose.

4. State the characteristics of a good coke, and give the tests necessary to determine the value of coke for blast furnace purposes.

6. Explain the principle on which the making of producer gas depends, and describe the method of its manufacture in any accepted form of gas producer.

6. Make a sketch (plan and cross section) of a reverberatory furnace, in which reducing and oxidizing conditions may be obtained at will, and explain how to vary from one condition to the other in the management of the furnace.

7. With aid of a sketch (plan and section) describe the McDougall roasting furnace, and the method of operating it.

8. Give the general formulae of the common silicates produced in slag making, classified on the basis of oxygen ratio between bases and acids.

9. State fully the general conditions that must be observed in calculating slags for smelting copper ores.

10. Give in regular sequence the steps in the calculation of a slag, assuming that the fluxes are free from impurities.

FACULTY OF PRACTICAL SCIENCE.

Metallurgy

FOURTH PAPER.

1. Give the heat requirements in a modern iron blast furnace.

2. What is the effect of an excessively high temperature on the product from a blast furnace, and how is this advantageous in the making of so-called "Bessemer pig?"

3. Give the theory of the conversion of iron into steel by the Bessemer process.

4. Explain the theory and method of making steel by the crucible process.

5. State the effects upon steel of sulphur, phosphorus, silicon, manganese, oxygen, and nitrogen.

6. Outline the method of copper smelting by the reverberatory processs from the initial treatment of the ore to the production of copper ingots.

7. Describe the method and give the theory of Bessemerzing copper matte.

8. Describe the barrel chlorination process for treating gold ore or concentrates, and state the conditions which would interfere with the application of this process.

9. In the cyanide process for gold ores, what would be the effect of iron sulphates, sulphates of aluminum, and magnesium, CO_2, organic matter, and K_2S, and how are these difficulties overcome?

10. Give the chemical reactions upon which the solution and precipitation of silver depends in the method of extraction with sodium hyposulphite solution.

FACULTY OF PRACTICAL SCIENCE.

Surveying—First Year.

(Only 10 questions to be answered.)

1. Classify the causes for errors in chaining. What is the difference in recorded lengths of a line 1000 ft. long measured at 10°F. and 90°F.? Tape standard at 60°F. and coefficient of steel ·0000065.

2. Show sample page of note book containing detail, &c., of course XY of a chain survey. State principles of such a survey and means of checking field work.

3. If the needle on a surveyor's compass were bent how would you adjust it? What is meant by Local Attraction, and how discovered, determined, and applied? Define Magnetic Declination.

4. From the left bank of a river determine :—

(*a*) its width by means of the chain alone.

(*b*) the length and bearing of a line AB on the right bank by any method.

5. Define Azimuth, and describe Back Angle Method of Traversing. Convert the following bearings into azimuths :—(*a*) N.30°10′E.; (*b*) S.18°15′W.; (*c*) N.15° 40′W.; (*d*) S.16°14′E.; and the following azimuths into bearings :— (*a*) 15°10′; (*b*) 354°16′; (*c*) 273°18′; (*d*) 91°10′.

6. Perform the adjustment for the line of collimation in the transit. Could an angle be measured or a line produced without correcting it? If so, how?

7. Give in order the adjustments required in the Y and Dumpy Levels. If the difference in the elevation of two points were required and no level were available, how would you construct an instrument to supply its place?

8. Show by figures the different methods employed in surveying the boundaries of a property. If on plotting the same an error of closure occurred, how would you balance it graphically?

9. In 1832 A.D. the traverse ABCDEF was run with a compass (no declination recorded); in 1895 a re-survey was made, but only stakes at B and E could be found. How would you proceed to place the corners A, C, D and F in their original positions and obtain difference in declination?

10. A set of levels was commenced from B.M. No. 1 whose elevation is 89·02.

At 1st position of instrument, B.S. on B.M. was 3·24, Int. Ss. on Sta 1, 6·3; Sta 2, 5·4; Sta 3, 8·9; Sta 4, 9·6; and F.S. on T.P. 12·42.

At 2nd position, B.S. on T.P, 4·62; Int. Ss. on Sta 5, 3·8; Sta 6, S·3; Sta 7, 9·6; Sta 8, 4·3; F.S. on T.P. 2·11.

At 3rd position, B.S. on T.P. 9·87; Int. Ss. on Sta 9, 6·3; Sta 10, 6·9; Sta 11, 7·4; Sta 12, 9·1, and on B.M. No. 2——. Elevation of B.M. No. 2 is 78·24.

Compare notes in book form, reduce elevations, and fill in reading on B.M. No. 2.

11. Define Turning Point and show its use. Distinguish difference between line of Apparent Levels and line of True Levels. Determine correction to be applied to obtain the latter.

12. What is the theory of the Level Bubble? Prove by figure the different steps necessary to adjust it.

FACULTY OF PRACTICAL SCIENCE.

Surveying—Second Year.

(Only 8 of the first 10 questions to be answered.)

1. In the formula for the stadia $D=\frac{f}{i}S+(f+c)$ what do each of the symbols represent? How would you determine the values of $\frac{f}{i}$ and $(f+c)$?

2. Upon what does the accuracy of a triangulate depend and how is the work tested? In a triangle ABC $A=80°20'$ $B=40°12'$ and $C=59°18'$, A measured 4 times, B 6 times, and C 7 times. Adjust the triangles.

3. How are latitude and longitude differences of a course determined? Deduce formula for calculating the area by coördinates.

4. Describe fully a method to fix soundings in a harbor survey. If soundings were required at different times across a river what method would you adopt?

5. A traverse line ABC azimuth of AB=$\alpha°$ and of BC=$\beta°$has a 10° curve run in between them, determine (*a*) tangential angle, (*b*) tangential distance, (*c*) the external distance. (*d*) If B.C. is at a full station length of last chord. (*e*) Deflection distance.

6. What precision is required in city surveying? How should corners be marked? How is a city lot described? What is the best way of laying out an addition on very broken ground?

7. Define profile section and cross section. Describe fully how each is obtained and plotted. Define a contour and show method of contouring a plan from profile and cross sections.

8. Deduce formula for true difference of elevation between two points 5 miles apart by simple angular levelling, correcting the angle.

9. From an area ABCDE cut off a given area by a line from corner A, determine its length and direction and point of intersection. In the same traverse BC is wanting in length and CD in bearing ; supply them.

10. Describe method of procedure in a topographical survey with stadia and transit. Would this method be adopted for large or small areas? and why? How would you construct a diagram for use with inclined readings.

Mine Surveying.

11. Describe the three tripod method in a mine survey. What measurements are recorded? Where are stations placed and how used for observation? What maps are required and why?

12. How is the underground connected with the surface survey two shafts being available? How would you determine the inclination and azimuth of an incline to meet the end of a tunnel, the point of entrance at surface being fixed?

FACULTY OF PRACTICAL SCIENCE.

Surveying—Third Year.

Geodesy.

1. (*a*) Explain with aid of figures:—Astronomical and geocentric latitude and the "angle of the vertical."

(*b*) Explain the cause of "spherical excess" and how determined in a spherical triangle.

2. Describe fully the measurement of a base line by any method adopted for an extensive triangulation, and state the points to be considered in the selection of triangulation stations.

3. When it is impossible to set the instrument over a triangulation station how are the angles at that station determined? Prove answer trigonometrically.

4. If α be the angle of elevation of B at A and β be the angle of depression of A at B and O the angle subtended at the centre of earth by distance A. B=k. Prove fully —

Diff. of elevation between A and B, $= k\frac{\sin\frac{1}{2}(\alpha+\beta)}{\cos\frac{1}{2}(\alpha+\beta+0)}$

Dominion Land Surveying.

5. Draw a sketch of a township laid out under 3rd system, showing numbering of sections, and positions and dimensions of roads and sections.

6. Describe fully the procedure in township subdividing, stating lines run, and corners marked, &c.

7. State the positions of:—Base lines, correction lines,

and initial meridians, and explain the use of each. What is the cause of "jog" and where does it occur?

8. (*a*) Where is the deficiency or surplus in a township under the 1st and 3rd systems distributed?

(*b*) What is a fractional range or township? Where does it occur?

9. Show by figures, dimensions and positions of mounds and pits for a township corner on correction line and base line and show method as adopted on prairie.

10. Show by figures the marking of:—(*a*) S. E. cor. tp. 2, rg. VII., (*b*) cor. bet. sects. 15, 16, 21, and 22, tp. 8, rg. III., (*c*) N. W. cor. sect. 33, tp. 6, rg. X., (*d*) N. E. cor. tp. 28, rg. XII. on Ind. Res. Bdy., (*e*) S. E. cor. sect. 3, tp. 3, rg. VI., (*f*) S. E. cor. tp. 7. rg. VIII.

FACULTY OF PRACTICAL SCIENCE.

Drawing, I.

Questions must be answered in each division—3 questions in each division constitute a full paper. All construction lines must be left, the work to be executed in pencil only.

Projection.

1. A hexagonal prism of 1 in. edge and $2\frac{1}{2}$ in. axis, rests on the ground plane on one edge of base which is inclined to the vertical plane of projection at 45°, the axis of prism forms an angle of 45° with the horizontal plane; give plan and elevation.

2. Show the plan, elevation, and true form of a section (of preceding figure) formed by a plane which divides the axis centrally and which is inclined to the horizontal plane of projection at an angle of 15°.

3. A cone, the axis of which is 3 ft., the diameter of base $1\frac{1}{2}$ in., rests on the horizontal plane on its side, the axis is contained in a vertical plane which forms an angle of 50° with the vertical plane of projection; give plan and elevation.

4. Show the development of the surface of the frustrum of a cone, the axis of which is $1\frac{1}{4}$ in., the diameter of lower face being $2\frac{1}{2}$ in. of upper face $1\frac{1}{2}$ in.

Perspective.

H—6 ft., Dis. 16 ft., Scale $\frac{1}{4}\frac{1}{8}$.

1. Make a perspective diagram, marking all lines and points. Explain their uses and how found, and write out 4 rules to be observed, in making drawings of objects in what is known as parallel perspective.

2. A square block of 8 ft. edge and 2 ft. thick forms the base of a square pyramid of 6 ft. edge of base and 8 ft. axis, the edges of base of pyramid are parallel to those of the block, one face of which is in the picture plane, the nearest corner being directly in front of spectator; their axes coincide and are vertical.

3. The base of a square pyramid of 10 ft. edge is parallel to the picture plane, and 10 ft. from it, the point of pyramid is 3 ft. to right and 1 ft. in—give perspective view.

4. A square plane of 5 ft. edge rests on the ground plane 4 ft. to right, one edge is in the picture plane and the plane forms an angle with the ground of 75°—give perspective view.

Mechanical Construction.

1. Make drawings (of side and end elevations and plan) of a wrought iron crank, showing shaft, one arm, and crank pin, with all essential parts. Stroke to be 2.5 in., scale $\frac{1}{6}$.

2. State the use of an eccentric. Show the common or usual construction. State the throw of the eccentric in your drawing—draw to a scale of $\frac{1}{6}$ marking dimensions.

3. Make a drawing (full size) of a square head bolt 1 in. diameter with washer and hexagonal nut (dimensions must be correct).

4. State the use of bearings, the metals used in their construction, how adjusted and secured. Make a drawing in plan and elevation showing a simple form of bearing.

FACULTY OF PRACTICAL SCIENCE.

Drawing, II.

(Questions must be answered in each division. Three questions in each division constitute a full paper—all construction lines must be left, the work to be executed in pencil only).

Descriptive Geometry.

1. A square prism of $\frac{3}{4}$ in. edge and 2 in. axis, rests on the upper edge of a cube of $1\frac{1}{4}$ in. edge and on the ground; so that the lower face of prism is inclined to the groundplane at 45°. Show an auxillary elevation on a vertical plane, making an angle of 50° with the vertical plane of projection.

2. The base of a pentagonal pyramid [of 1 in. side and 2 in. axis] is in a vertical plane which forms an angle of 40° with the vertical plane of projection, one corner of base touches the ground plane, the adjacent edges forming equal angles with it, give plan and elevation.

3. The diagonal of a cube is 3 in. Con-truct the cube and show the true form of a section made by a plane cutting the axis centrally and at an angle of 30° to it; the plane to be parallel to a diagonal of the upper face.

4. Construct a quadrilateral ABCD. Make AB $1\frac{1}{2}$ in., BC $2\frac{1}{2}$ in., AC 3 in., CD $1\frac{3}{4}$ in., DA $2\frac{1}{4}$ in. The long diagonal AC forms the XY line; AB BC being the vertical traces, and AD DC the horizontal traces of two oblique planes; show the true form of the dihedral angle formed by the planes.

Perspective.

Height 5 ft., Distance 20 ft., Scale $\frac{1}{48}$.

1. One edge of a cube of 9 ft. edge touches the picture

plane 3 ft. to right, the adjacent faces vanishing equally from it. Give perspective view of this cube, when cubes of 3 in. edge are cut out of each upper corner.

Height 6 ft., Distance 18 ft., Scale $\frac{1}{48}$.

2. A hexagonal block of 4 ft. edge and 2 ft. thick rests on the ground plane on one of the rectangular faces, the long edges of which vanish to the left at 45°, the nearest corner of this face is 3 f . to right and 3 ft. in ; a circular hole 4 ft. diameter passes centrally through it.

3. A square prism of 4 ft. edge of out base and 12 ft. axis rests on the ground plane on one edge the axis forms an angle with tbe ground of 45°, the horizontal edges vanishing to the left at 45°.

4. A Greek cross of 9 ft. axis, shaft and arm 3 ft square, rests vertically on the ground plane, centre of base being 2 ft. to R and 6 ft. in. ; show the shadow cast by it, the light being in the picture plane 15 ft. to right and 15 ft. above the picture line. Face of cross is perpendicular to picture plane.

Mechanical Construction.

1. Construct 4 teeth of a pair of geared wheels (the distance of the shafts being 3 ft. apart), the one being required to make three revolutions while the other makes two. Scale $\frac{1}{2}$, pitch 2 in., depth $\frac{3}{4}$p., tooth .48p.

2. Make a sketch of an eccentric, of 4-inch throw, with its connections ; in side elevation only—state its use —scale $\frac{1}{3}$.

3. What is a slipper slide used for? Make a sketch showing one and its connections with crank and piston rod ; in plan and elevation.

4. Make a drawing [in horizontal section] of a D valve, showing valve seat, steam ports and exhaust, the throw of the eccentric being 5 inches.

FACULTY OF PRACTICAL SCIENCE.

Materials of Construction—Second Year.

1. Enumerate the impurities usually found in iron. State briefly the influence of each on the strength and ductility.

2. What is the distinguishing property of steel? On what does this property depend and what are its limits?

3. What are the properties of copper which make it valuable to the engineer, and why is it not so extensively used as iron? What are the most injurious elements found in copper, and in what way do these elements affect its value? How is copper usually cast, and what are the principal alloys of which it is an element?

4. State the physical properties of nickel. How is it generally used? How does the addition of nickel affect the physical properties of steel?

5. What is the effect of annealing, wire drawing, hammering, rolling, and chilling? Explain the process of annealing (*a*) copper, and (*b*) iron.

6. Define stress, strain, modulus of elasticity, elastic limit, statical strength, dead load, live load, working stress, factor of safety. State and describe the different kinds of simple stress.

7. Enumerate the observations usually recorded in carrying out a tensile test, and also the results calculated for commercial purposes. Show how the calculations are made from the observations.

8. Describe briefly how a transverse test is carried out.

Assuming the theory of the elastic moment, show how the strength is determined from such a test.

9. How can the tenacity of wrought iron and steel be expressed in terms of the proportion of carbon present?

10. What is the effect on materials of change in temperature, age, and variable loads? What is the chief cause of crystallization in iron, and how does this affect the strength?

11. State the different methods of seasoning timber, pointing out their respective good and bad features. Enumerate the characteristics of good timber and the principal conditions which affect the strength.

12. What are the qualities which determine the suitability of a stone for use in construction? Give their relative importance and the principal factors on which each depends. What stones as a general rule possess these qualities? Describe the appearance of a fresh fracture of a good building stone.

FACULTY OF PRACTICAL SCIENCE.

General Engineering—Third Year.

Graphical Statics.

1. A ladder AB weighing 50 pounds rests against a smooth wall AC (See fig. I.) It is prevented from slipping down by the friction at the base. Determine graphically the reaction between the ladder and wall, and also the frictional force at the base.

2. Determine graphically the weight W (fig. II.) required to keep the frame $ABCD$ in equilibrium. BC and AD are horizontal.

3. Draw the stress diagram for the crane shown in fig. 3. $AB=AC=$ 40 ft. Stresses to be tabulated.

4. The roof truss shown in fig. IV. is symmetrical, and $AB=BC$. BD is at right angles to AC. A load of 1,000 pounds is concentrated at each of the points B, C and F. Draw the stress diagram and tabulate the stresses.

5. The trusses of a roof are constructed as shown in fig. V. The span is 80 ft. with a rise of 28 ft. $AB=BC=CD=DE$; EF, DG and CH are vertical, and $EF=16$ ft. The trusses are 8 ft. apart. The roofing material weighs 5 pounds per square foot. Draw the stress diagram assuming that the roof carries 15 pounds of snow per square foot of surface and a normal wind pressure on one side of 15 pounds per square foot. Assume the roof to be anchored on the side on which the wind acts.

6. The truss shown in fig. VI. is symmetrical. A load of 2,000 pounds is placed at each of the points B,

C and D, 1,500 at *E*, and 1,000 at *L*,*M*, and *N*. The span is 60 ft. with a rise of 20 ft. $AG=GE=19\text{-}5$ ft. $AB=BC=CD=DE$; *DF*,*CG* and *BH* are at right angles to *AE*. Determine graphically the bending moment at the centre of the truss, and from this determine the stress in the member *GK*.

7. The span of a Warren girder constructed as shown in fig. VII. is 60 ft. The girder supports one-half of a roadway which weighs 2 tons per lineal foot. Draw the stress diagram and tabulate the stresses.

8. A Keystone bridge truss is constructed as shown in fig. VIII. The truss is made up of 6 panels of equal length and the span is 60 ft. Determine graphically the stress on the members cut by the line *a b*, the distribution of load being as shown in the fig. The internal cross braces are designed to resist tensile stresses only.

9. Draw the stress diagram for the cantilever truss shown in fig. IX.

FACULTY OF PRACTICAL SCIENCE.

Structural Engineering—Third Year.

1. Define stability, strength, stiffness, stress, strain. State the conditions of equilibrium of a body.

2. A girder 24′ long is loaded at points 2′, 4′, 5′, and 10′ from one end; the loads are 4, 5, 6, and 8 tons respectively. Determine the bending moment and shearing force equations for each segment of the girder, and hence determine the bending moment at each of the loaded points.

3. Two wheels 4′ apart, and carrying 6 and 2 tons respectively, roll over a girder 20′ long. Place the wheels in the position which will give the maximum bending moment, and determine its value.

4. Deduce the equations relative to the elastic moment

$$M/I = f/y = E/R$$

5. Show that the most economical distribution of material in an I beam with equal flanges is secured when the sectional area of the web is equal to the sectional area of the flanges, assuming that the thickness of the web is some fraction of the depth. Also show that the moment of resistance in this case is $\frac{1}{3} f A d$, where f is the maximum intensity of stress, A is the total sectional area, and d is the effective depth.

6. The flanges of a rolled joist are each $4'' \times \frac{1}{2}''$; the web is $8'' \times \frac{1}{2}''$ thick; the span is 10′. What uniform load will the joist carry, allowing a maximum stress of 15,000 lbs. per sq. inch?

7. Show how to design an I girder of uniform strength to carry a uniform load of w lbs. per lineal foot, the width of flanges, thickness of web, and depth being constant and equal to some fraction of the span. Prove that the deflection of such a girder at the centre will be equal to $l^2/8R$, where l is the span and R is the radius of curvature.

8. Design a hollow cast iron pillar, 15′ long, to support a load of 20 tons, allowing a factor of safety of 6. The crushing strength of the metal is 60,000 lbs. per sq. inch. The thickness of the metal may be taken to equal $\frac{1}{12}$ the diameter. $a_1 = \frac{1}{4000}$.

9. The line of action of the load on a tension member is $\frac{1}{8}''$ from the centre of section. The section is a circle of 2″ diameter, and the load is 20 tons. Calculate the maximum stress in the member.

10. Show that the deflection of a uniformly loaded girder is equal to $\frac{5}{384} Wl^3/EI$, where W is the total load, l is the span, E is the modulus of elasticity, and I is the moment of inertia.

11. Determine the shortest length of bar of a square inches in sectional area, which will safely resist the shock of a weight w falling a distance of h feet, the maximum admissible stress being f.

12. A reservoir wall is 4′ wide at the top and is 16′ high. The water side is vertical and the other side has a uniform batter. Calculate the width of the base so that there will be no negative stress. (The weight of one cubic foot of masonry is 125 lbs.)

FACULTY OF PRACTICAL SCIENCE.

Electrical Engineering—Third Year.

1. Define the electro-magnetic (absolute) unit of current, potential, and resistance. What relation is there between the practical units (the ampere, volt, and ohm) and the absolute units?

2. Deduce the equation of the magnetic circuit. The magnetic circuit is analogous to the electric circuit. Compare the two, pointing out where there is want of analogy. One magnetic circuit of a dynamo has a mean cross section of 530 sq. cms.; the mean length is 153 cms.; the clearance between poles and armature is 0·16 cms.; the total number of turns on the magnetising coils is 770. Calculate the total number of lines of force in the circuit when a current of 9 amperes is flowing in the coils. (μ=800).

3. How do parallel currents affect one another? Explain the operation of a Siemens electro-dynamometer and show that the current is proportional to the square root of the deflection.

4. Explain the construction of a Weston voltmeter or ammeter, the principle on which it operates, and show that the volts or current is proportional to the deflection of the needle.

5. What is the unit of electric power, and what is the relation between this unit and a horse-power? Assuming that an arc lamp requires 7 amperes with a terminal voltage of 70, calculate the horse-power and voltage of a machine which will supply 30 arc lamps in series with a line resistance of 30 ohms.

6. State the laws of the heating effect of a current

flowing in a simple conductor. What amount of power would be dissipated in heating the line in the preceding question?

7. Why is it more economical to transmit power at a high voltage? 5,000 horse-power is transmitted 20 miles at 20,000 volts. The resistance of the wire is .3 ohms per mile. Calculate the power lost and the voltage at the consuming end of the line.

8. Explain self-induction and mutual induction of circuits. How does the self-induction of a circuit affect an alternating current?

9. What is the principle on which a transformer operates? The current in the primary of a transformer causes the total induction in the core to vary from 10^6 lines in one direction to 10^6 lines in the opposite direction; the number of turns on the secondary is 100, and the primary current alternates 120 times per second. Calculate the mean value of the electromotive force in the secondary.

10. 50 incandescent lamps, taking $\frac{1}{2}$ an ampere each, are to be supplied with current from a generator giving 120 volts; the drop in volts is not to exceed 2 per cent. What will be the resistance of the required conductors?

FACULTY OF PRACTICAL SCIENCE.

Electrical Engineering—Fourth Year.

1. What is the practical unit of current, e. m. f., resistance, power, and energy? How are these units related to the absolute (electromagnetic) units?

2. Define induction density, intensity of magnetisation, flux, magnetising force, magnetomotive force. What is the value of the magnetomotive force around a conductor carrying a current?

3. Deduce the equation of the magnetic circuit, and apply it to determine the ampere-turns required to induce 95×10^5 lines of force in one magnetic circuit of a generator, two-thirds of which is made up of annealed plate with a cross section of 530 sq. cms., and one-third cast iron with a cross section of 770 sq. cms. The mean length of the circuit is 150 cms., and the distance between the armature and poles is ·16 cms. $\mu = 200$ for plate, and 35 for cast iron.

4. A conductor is placed in a magnetic field at right angles to the lines of force. Deduce an expression for the force exerted on the conductor when a current is passed through it; and hence show that the power delivered to a circuit is the product of the e. m. f. and current.

5. Explain in detail a method of measuring magnetic permeability. How would you determine the strength of a magnetic field at any given point?

6. Describe the Thomson integrating wattmeter, and explain how it records the total amount of power used.

7. 40 arc lamps are to be connected in series in one circuit. Each lamp requires 9 amperes with a terminal voltage of 50. Energy is worth $20 per horse-power year, copper is worth 30 cents per lb., and rate of interest is 5 per cent. If the length of conductor required is 3 miles, calculate the size which will give maximum economy, the voltage and horse-power of generator required, and the loss of power in line.

8. Deduce an expression for the e. m. f. of a multipolar generator (*a*) when the armature is series wound, (*b*) when the armature is multiple wound. The generator referred to in question 3 has 8 poles, the armature has 288 conductors and is multiple wound; calculate the e. m. f. generated, when running at 275 r.p.m.

9. What are the principal methods of exciting the the fields of a generator? Show how the connections are made in each case. When is a generator said to be over-compounded, and when is this condition required?

10. Discuss the theory of the Kelvin Balance, and show that it measures the strength of a current in absolute measure. Show also how it can be used to measure power. Point out its good features and its defects.

FACULTY OF PRACTICAL SCIENCE.

Electrical Engineering—Fourth Year.

Alternating Currents.

1. Explain mutual and self inductance. What is the practical unit of inductance, and how is it related to the absolute (electro-magnetic) unit?

2. Determine, with the assistance of graphical treatment, the relation between the impressed e. m. f. and current in an inductive circuit, when either one follows a sine law. A harmonic e. m. f. of 100 volts, frequency 60, is applied to a circuit with a resistance of 6 ohms and an inductance of 0.2 henry. Calculate the current produced, and the phase difference between the current and e. m. f.

3. What effect has the capacity of a conductor on alternating currents? An alternating harmonic e. m. f. of 200 volts, frequency 60, is applied to a circuit of 2 ohms resistance, and 0·4 henry inductance. Determine the capacity of the condenser which must be connected in series to obtain the maximum current.

4. What are the factors which determine the frequency of the e. m. f. of an alternator? Show that the e. m. f. of an alternator is given by the equation

$$E=\frac{NPCnK}{10^8}$$

where N is the number of lines of force passing from one pole to the armature, P is the number of poles, C is the number of conductors in series on the armature, n is the

revolutions per second, and K is the ratio of the virtual to the mean volts.

5. What are the principal multiphase systems used in practice? Show by diagrams the connection of the circuits in the different systems.

6. Describe and explain the operation of any instrument for measuring alternating current or e. m. f. which is based on the dynamic action of two currents. Show how such an instrument can be used to measure power in an alternating current circuit, pointing out the chief source of error and how it may be practically avoided.

7. Distinguish between apparent and real watts. 1,000 k. w. is delivered at 23,000 volts, to a transmission line 30 miles long. The resistance of the line is 40 ohms; the power factor of the circuit (including transmission line and consuming circuit) is ·85. Calculate the current in the transmission line, and the loss of power in transmission.

8. State the different sources of loss in a transformer. What are the factors which determine the loss in each case, and how does the loss depend on each factor?

9. The primary circuit of a transformer has 1,040 turns, the secondary has 104 turns; the resistance of the secondary receiving circuit is 4 ohms, and the reactance is 2·4 ohms. If the primary e. m. f. is 2,100, calculate the secondary e. m. f., the secondary current, and the power consumed in the receiving circuit, assuming the drop in secondary volts to be 2 per cent. from no load. What current will be drawn by the primary, assuming the efficiency of the transformer to be 96·5 per cent.?

10. Explain the operation of an induction motor. What is the chief difficulty met in the operation of such motors?

FACULTY OF PRACTICAL SCIENCE.

Thermodynamics—Third Year.

1. Define isothermal expansion, adiabatic expansion, latent heat, saturated steam, superheated steam, entropy, thermal efficiency.

2. If V represents the volume of 1 pound of air under a pressure of P pounds per square foot, and at an absolute temperature of τ degrees Fahr., show that

$$PV=53{\cdot}18\tau$$

the weight of 1 cubic foot of air at 32° Fahr. being ·0807 pounds, and the coefficient of expansion being $\frac{1}{493}$ per degree Fahr.

3. The expansion of a gas follows the law $PV^n=$constant. Show that the external work done by expansion is given by the equation

$$W=\frac{P_1V_1-P_2V_2}{n-1}$$

where W represents the work done in foot-pounds, P_1, V_1 refer to the initial state, and P_2, V_2 to the final state. If τ_1 and τ_2 refer to the initial and final absolute temperatures, show that

$$\frac{\tau_2}{\tau_1}=\left(\frac{V_1}{V_2}\right)^{n-1}=\left(\frac{P_2}{P_1}\right)^{\frac{n-1}{n}}$$

4. Explain what is meant by a "reversible engine." Prove by the application of the second law of thermodynamics the principle that no other heat engine can be more efficient than a reversible one, when working between the same limits of temperature. Show that the efficiency of a reversible engine working between the absolute temperatures τ_1 and τ_2 is $\frac{\tau_1-\tau_2}{\tau_1}$

5. Account (after evaporation) for the total heat H supplied in the evaporation of 1 pound of water.

6. Describe a method of measuring the dryness of steam. Steam with a dryness factor ·96 expands adiabatically from 80 pounds absolute pressure to 20 pounds. Calculate the dryness after expansion.

At 80 pounds, $L=895{\cdot}6$; $t=311{\cdot}8°$ Fahr.
" 20 " $L=954{\cdot}6$; $t=228°$ "

7. 10 horse-power is delivered to a shaft by a compressed air motor whose mechanical efficiency is ·85. The air supplied is at a pressure of 100 pounds, and the exhaust pressure is 16 pounds absolute. Assuming the law of expansion to be $PV^{1\cdot3}=$constant, calculate the quantity of air used per minute (*a*) if it is supplied at 60° Fahr., (*b*) if it is heated to 300° Fahr.

8. Ten equi-spaced ordinates of an indicator diagram obtained from an engine under brake test were measured in inches as follows:—1·13, 1·32, 1·18, ·83, ·55, ·44, ·37, ·31, ·25. The pressure scale was 80 pounds to the inch. The diameter of cylinder was 12″, of piston rod 2″, and the stroke was 14″. The horizontal distance from centre of shaft to end of brake arm was 4′, and the vertical force exerted at end of arm was 310 pounds, when the indicator card was taken. If the engine was running at 300 r. p. m., calculate (*a*) the indicated horse-power, (*b*) the brake horse-power, (*c*) the mechanical efficiency.

9. The travel of a slide valve is 4″, lead $\frac{1}{8}$″, cut off ·4. Determine the outside lap, angle of advance, and draw the outline of theoretical indicator diagram, the ratio of connecting rod to crank length being 5.

10. Derive the equation of equilibrium for a simple Watt governor. What is the meaning of the term "hunting" as applied to governors?

FACULTY OF PRACTICAL SCIENCE.

Hydraulics—Fourth Year.

1. Show that the centre of pressure on any plane surface submerged in a liquid is at a depth H measured from the line of intersection of the plane of the surface and the surface of the liquid, the value of H being given by the equation

$$H=\frac{I}{Ah}$$

where A is the area of the surface, h is the distance of its centre of gravity measured from the same line as H, and I is the moment of inertia about the same line.

2. Prove that the theoretical velocity of discharge from an orifice is given by the equation

$$v=\sqrt{2gh}$$

where v is the velocity, and h is the head over the centre of the orifice. When does this equation require modification?

3. A vessel containing water is revolved about a vertical axis; the head over a given point on the axis of revolution is h. Show that the head H at any point on a radius measured from the given point is given by the equation

$$H=h+\frac{u^2}{2g}$$

where u is the linear velocity of the point considered.

4. The inside radius of an outward flow turbine is 2 feet, the outside radius is 2 feet 8 inches, and the turbine runs at 120 r. p. m. What will be the increase in

velocity of water due to centrifugal force, assuming the velocity along the vane at entrance to be 20 ft. per second?

5. Define standard orifice, coefficient of contraction, coefficient of velocity. Explain how the coefficient of velocity is determined.

6. A canal lock 80 ft. long and 20 ft. wide is emptied through two orifices, each of 4 square ft. area; the level of the tail bay is 4 ft. and the water in the lock is 16 ft. above the centre of the orifices at the beginning. Calculate the time required to empty the lock, the coefficient of discharge being 0·7.

7. Show that the theoretic discharge through a rectangular notch or weir is given by the equation

$$Q=\tfrac{2}{3}\sqrt{2g}bH^{\frac{3}{2}}$$

where Q is cubic feet discharged per second, b is the breadth of notch, and H is the head of water over the lower edge of the notch. What is the principal application of this equation?

8. Explain the principle and action of the Venturi water meter. The maximum and minimum sectional areas of the stream in a Venturi meter are 1 and 0.12 square ft. The difference in pressure head at the two sections as indicated by two piezometers is 1 ft. Determine the discharge in cubic foot per second.

9. What diameter of pipe would be required to give a discharge of 70 cubic feet of water per second, the length of pipe being 4,500 feet and the head 24 feet. $f=\cdot 013$.

10. Define wetted perimeter, hydraulic radius, slope. Show that the velocity of flow in conduits, canals, and channels can be represented by the equation

$$V=C\sqrt{rs}$$

where V is the velocity, r is the hydraulic radius, s is

the slope, and C is a coefficient depending on the condition of the wetted perimeter.

11. A nozzle ·12 ft. in diameter, whose coefficient of discharge is ·95, delivers water to a Pelton wheel 2 ft. in diameter; the pressure at the entrance to nozzle is equivalent to a head of 80 ft. The angle B between the outer lip of the vanes and their direction of motions is 30°. Determine the most economical speed, the efficiency when running at this speed, and the horse power.

FACULTY OF PRACTICAL SCIENCE.

Machine Design—Fourth Year.

1. Enumerate the forces which may act on the parts of a machine, and which must be considered in designing these parts.

2. Deduce two expressions for the elastic torsional moment of resistance.

3. Deduce an expression for the maximum stress in a shaft when it is subjected to twisting and bending moments.

4. A band saw, $\frac{1}{32}''$ thick and $\frac{1}{2}''$ wide, runs around two pulleys of equal diameter. The saw is driven by friction, its initial tension exerting a force of 50 lbs. on the pulleys. If the diameter of the pulleys is 4′, calculate the maximum stress in the saw.

5. Derive an equation expressing the relation between the tensions on the two sides of a belt.

6. 100 horse-power is transmitted to a shaft by means of a belt running over a pulley on one end of the shaft. The pulley is 36″ in diameter and runs at 250 r.p.m. The maximum stress in the belt is 120 lbs. per inch of width, and in the shaft 10,000 lbs. per sq. inch; the coefficient of friction is ·35, and the angle of embrace is 170°; the pulley is midway between two bearings whose centres are 4′ apart. Calculate (*a*) the width of belt (*b*) the diameter of shaft.

7. Design a flanged coupling for a 3″ shaft.

8. In designing the piston rod of an engine it is usual to base calculations on the assumption that steam at full

pressure may be *suddenly* admitted to the cylinder. On this assumption determine the proper size of piston rod for an engine with a 10″ cylinder, using steam at 100 lbs. pressure, allowing a maximum stress of 9,000 lbs. per sq. inch.

9. Design the cylindrical shell of a boiler, 50″ in diameter, to work at a pressure of 80 lbs., the longitudinal seams to be double riveted, and the circumferential seams to be single riveted; the tensile strength of the plate to be 60,000 lbs., and the factor of safety to be 5.

10. A crane hook is made of $1\frac{1}{2}$″ round iron; the section on which the maximum bending moment is exerted is 2″ in the plane of the hook, $\frac{3}{8}$″ on the outside, and $1\frac{3}{8}$″ on the inside; the distance from the inside of this section to the centre line is $1\frac{1}{4}$″. What load will the hook carry allowing a maximum stress of 12,000 lbs. per sq. inch?

THEOLOGY.

Divinity.

FIRST PAPER.

1. "I drew them with cords of a man, with bands of love." What is Hosea's fundamental idea in this passage?

2. What are the ideas on which Isaiah insisted?

3. Explain the reforms of Hezekiah and Josiah. Why did they fail?

4. What was the chief work of Jeremiah?

5. What are the main ideas of the prophets of the Exile?

6. What engaged the attention of priests and scribes during the Exile?

7. What is the Psalter's place in a history of the development of Israel?

8. Show the significance of the work of Ezra and Nehemiah.

9. In what respects can the Bible be distinguished from other sacred writings?

N.B.—Answers to six questions will be considered sufficient for pass, but not for B.D. or Leitch Memorial.

Divinity.

SECOND PAPER.

1. Considering Jesus as a prophet, state the chief sides of His work or His great ideas.

2. Show wherein the essence of His priestly work consisted.

3. In what different forms did His priestly work appear to His disciples and to Paul?

4. Explain the origin of the two different conceptions.

5. In what senses did Jesus act as a king during His earthly life?

6. In which of his epistles and in what sense does Paul ascribe kingship to Jesus?

Four for pass and six for B.D. or Leitch Memorial.

Apologetics.

FIRST PAPER.

1. Distinguish the primary and secondary causes of unbelief. Mention the chief secondary causes.

2. Define scepticism, and show its relation to faith, denial, and credulity.

3. Distinguish between dogmatic and critical atheism.

4. Explain Hume's dictum, that "what is neither abstract reasoning concerning number or quantity, nor experimental reasoning concerning matter of fact or existence, can only be sophistry or illusion."

5. In maintaining the theistic theory of the universe what would you make your starting point, and what line of thought would you follow?

6. On the assumption that the world as it now exists is the result of a process of evolution, how would you show that the process is not due to the action of mechanical forces alone?

7. Admitting that life proceeds from antecedent life, and that there have been no breaks in the world-process, how is the first appearance of life to be accounted for?

8. Show the bearing of the theory of evolution upon the argument from design for an intelligent Creator.

Apologetics.

SECOND PAPER.

1. What are the salient points (1) of contrast, (2) of contact, between the positions taken by the opponents of Christianity in the first century and the eighteenth?

2. What were the main differences between the movement of unbelief in England and Germany in the eighteenth century?

3. To what are the differences of the unbelief of the present time and that of the eighteenth century due?

4. How does the theory of evolution help to relieve perplexity concerning the existence of pain and suffering?

5. How may the doctrine of the lapse of man from a condition of innocence be reconciled with the theory of evolution?

6. What testimony does science furnish in support of the idea of the Fatherhood of God?

7. Distinguish socialism, communism, and anarchism, and indicate the aims and methods of each.

8. What is the main defect in the socialistic conception of the teaching of Jesus Christ?

9. Mention any facts which give a special interest at present to an inquiry concerning the social teaching of the Gospel.

B.D. (NEW COURSE.)

Apologetics.

THIRD PAPER.

1. Show that the classification of religion into Natural and Revealed is not justifiable.

2. State the argument for the Divine existence from (1) the idea of causality, (2) the facts of our Moral consciousness. Point out wherein the former fails.

3. State the design argument from the point of view of evolution.

4. Distinguish between Materialism and Positivism as philosophical systems, and indicate the attitude of the latter, as represented by Comte, to religion.

5. What are the leading principles of Pantheism, and wherein does the strength of the system lie?

6. What are the points of contrast between the Hegelian and Spinozan systems regarding God, the world, and man?

7. "Personality is not compatible with the idea of the absolute; an absolute personality is a contradiction in terms." Discuss this statement.

N.T. Criticism and Exegesis.

1. State the difference between the old exegesis and the new.

2. Explain the allegorical method of interpretation.

3. What was Hegel's special contribution to the interpretation of Scripture?

4. What Pauline doctrine furnishes the key to the solution of the theoretical and practical difficulties of 1 Cor.? Illustrate in the case of factions and impurity.

5. Translate and explain:—

(1) I. Cor., 3:15.
(2) I. Cor., 12:31.
(3) I. Cor., 11:11.
(4) I. Cor., 13:13.
(5) Eph., 1:22-23.

6. (1) Translate and explain I. Cor., 3:11-12, and Eph., 2:20. (2) How are they to be harmonized? (3) Distinguish *ἐπὶ τὸν θεμέλιον* and *ἐπὶ τῷ θεμελίῳ*.

7. What are the central ideas of the Epistles to the Ephesians and Colossians respectively which differentiate them from each other?

8. What were the two disturbing forces of the faith of the Colossians?

9. Translate Col. 1:16-17 and Col. 1:19, and state the heretical teaching combated in these passages.

(1) Parse *ἐκτίσθη*, *συνέστηκε*, *εὐδόκησε*, *κατοικῆσαι*.

(2) What is the subject of *εὐδόκησε*?

10. Where and when was Colossians written?

B.D. (NEW COURSE.)

Apologetics.

FIRST PAPER.

1. "That faith lies at the basis of all science cannot be disputed." Discuss this statement.

2. State briefly the relation of religion and morality.

3. Show that the opinion that "badness is mere negation, want, and limit" cannot be accepted as correct.

4. How does Pfleiderer explain the origin of Paul's conception of Christ's death (1) as an atoning sacrifice, (2) as an expiation on behalf of Gentiles as well as Jews?

5. "If a continuous natural development between the sphere of nature below man and man is accepted, does not man then lose his distinguished position and distinguishing dignity, and is he not lowered to a level with the subhuman creation?" Discuss this objection.

6. Show how the pessimistic philosophy of Schopenhauer is a consequence of the Kantian dualism, and also that his judgment regarding the world is groundless and arbitrary.

7. State the true religious optimism as taught by Christianity.

8. "The prophets were men of religious genius, full of religious inspiration, who drew from their own religious moral spontaneity the new ideas of God's moral nature and working, and of Israel's destination to be a holy people of God." Discuss this.

B.D. (NEW COURSE.)

Apologetics.

SECOND PAPER.

1. What were the two main defects in the Christian Apologetic of the Deistic period?

2. Discuss the intrinsic credibility of the Decalogue as a Mosaic utterance.

3. How may the absence in Mosaism of any reference to a state after death be reasonably accounted for?

4. To what extent has history realised the ideals of the O. T. prophets?

5. How far can the O. T. Scriptures retain their value as a religious guide for those who accept the results of recent criticism?

6. Criticise Le Conte's statement of the relation of evolution to the idea of Christ:—"As organic evolution reached its goal and completion in *man*, so human evolution must reach its goal and completion in the ideal man Christ Jesus."

Junior Hebrew.

1. Correct the following words: אִמֹּר דְּבַרִים חְמוֹר לְאַרִי בְּאֱמֶת

2. How is the definite article represented in Hebrew? Give illustrations showing how it is pointed.

3. Give five different words showing how Hebrew expresses the possessive pronouns.

4. Give the following parts of any regular verb: 1st sing. perf., 3rd sing. imperf., infinitive construct, imperative, active participle.

5. Translate (*a*) Gen. I, 10; (*b*) I Sam. IX, 6; X, 2; XI, 14.

6. Parse or analyse each word in Psalm I, 1; Gen. I, 7; I Sam. IX, 2; X, 2.

7. Translate: זֶה הַיֶּלֶד אֲשֶׁר שָׁמַע אֶת־קוֹל
מִי הָאִישׁ הַזֶּה
לָקַח הַמֶּלֶךְ הַחֶרֶב
קָרָא זֶה אֶל־זֶה

8. Translate into Hebrew: A word; words. The good woman. The woman is good. What has the man done? I remember the songs which I heard in the temple. These are the asses which we slew. The law of the Lord is good.

Senior Hebrew.

1. Discuss the question of tenses in Hebrew and state fully the use of the imperfect.

2. Translate (*a*) into Hebrew:

The man wrote in the book.
The wise people rest on the seventh day.
The man heard the voice in the garden.
The good queen of the land sat upon the earth.
Thou hast kept the hearts of this people from evil.

(*b*) Into English:

כָּתַבְתִּי לָעָם הַזֶּה אֶת־כָּל־ דִּבְרֵי יְהוָה
אָמַר יִצְחָק הַקּוֹל יַעֲקֹב וְהַיָּדַיִם עֵשָׂו
אָכַלְנוּ מִכָּל־ עֵץ הַגָּן
עֲשָׂה הַשַּׂר כְּמִצוֹת הַמֶּלֶךְ
מָה רָמִים הַהֵיכָלִים הָהֵם

3. Explain the term "casus pendens", and the uses of the following words:

לִבְלְתִּי אַיִן בַּל אַל לֹא

4. Translate with brief grammatical notes Zech. I. 1-3; Mal. I. 10; Hagg. I. 6.

5. Parse or analyse each word in the following verses: Mal. II. 7; Zech. III. 4; Hagg. II. 1.

6. Explain Mal. III. 6; Hagg. II. 5-7.

O. T. Criticism and Exegesis.

1. What was "The Message of Amos?" Show how this question is affected by the results of modern criticism.

2. Discuss carefully any one of the disputed passages in Amos.

3. Translate Amos III. 1-8. Explain the course of thought. Give brief exegetical notes.

4. Translate Amos IV. 4-6. What important questions arise in connection with this passage?

5. Translate Amos II. 4-5. Give the arguments for and against the genuineness of these verses.

6. Name the different periods of post-exilic Jewish history, giving briefly the characteristic features of each.

7. State the causes, the significance, and the results of the Maccabean revolt.

8. Give a brief account of "The Wisdom of Jesus the Son of Sirach."

Honour O. T. Criticism.

AMOS.

1. Discuss the evidence brought against the genuineness of the epilogue.

2. Give a brief account of the times of Amos, and discuss the character and style of Amos as a teacher.

3. Define specifically the aim of his polemic and his relation to public worship.

4. What bearing has the contents of this book on the "Documentary Theory of the Hexateuch?"

5. Translate Amos VIII. 11; VII. 12, 13, 16, 17.

6. Translate with brief explanatory notes Amos v. 1-5.

7. Translate Amos I. 1-5. Discuss any critical questions involved.

Honour O.T. Criticism.

DANIEL.

1. Discuss briefly the date and structure of the book.

2. Write a brief note on the foreign words in Daniel.

3. Show the relation of Aramaic to Hebrew. Comment upon any points of similarity or difference between them.

4. Why is the term "Chaldee" an unsuitable designation for this dialect?

5. Parse and analyse each word in Dan. II. 14.

6. Translate Dan. II. 4-6.

7. Translate with brief notes Dan. II. 29-32.

8. Translate the following words and phrases into Hebrew:—

מַלְכָּא אָרַיוֹן דִּי
מִן־קֳדָם אֱלָהּ שְׁמַיָּא
יְנִתְּנוּן־לֵהּ לְהַחֲוָיָה לְמַלְכָּא

Honour O. T. Criticism.

THE BOOK OF JOB.

1. Give a general view of the contents of the book and discuss its literary structure.

2. Give your view as to the purpose of the book.

3. Discuss the Satan-idea in the book of Job.

4. Translate (*a*) I. 7-10, (*b*) III. 1-6.

5. Translate and explain IV. 1-6.

6. Translate with brief grammatical and exegetical notes v. 22-26.

7. Translate XLII. 12-14.

Honour O. T. Criticism.

THE CANON—ANY SIX QUESTIONS.

1. State briefly the prevailing view of the composition of the Hexateuch.

2. Discuss the date of Daniel and its place in the canon.

3. What is the modern view of the growth of the canon? Give the chief stages with dates.

4. What kind of critical questions arise in connection with the book of Amos?

5. Write a note on the beginning of the Canon as distinguished from the beginning of Literature.

6. How does the book of Isaiah appear in the light of modern criticism?

7. What is meant by "canonical"? Mention any books whose canonical character was disputed.

8. Write a note on the phrase "Wisdom Literature."

Church History.

Ante-Nicene Period.

1. Give a brief account of the life and works of Eusebius.

2. Characterise the views of Eusebius on (1) the Canon, (2) Heresy, (3) the relations of the Church and the Empire.

3. Describe any one of the following: (1) The Gospel of Peter, (2) the Didacte (3) the Ignatian Epistles.

4. Annotate the following:

(*a*) "John * * who was a priest that bore the sacerdotal plate, rests at Ephesus."

(*b*) "Papias, a man well skilled in all manner of learning and well acquainted with the Scriptures."

(*c*) "A very celebrated martyr of those times was Pionius."

(*d*) "After coming to Rome I made my stay with Anicetus."

5. Discuss the origin and history of Montanism.

6. Give some account of Marcion and his teaching.

7. Discuss the story of the Thundering Legion.

8. Enumerate and briefly characterise the works of Clement of Alexandria.

9. Who were the Quarto-decimans?

History of Dogma.

Doctrine of the Incarnation.

1. State the presuppositions of the doctrine of the Incarnation.

2. Trace briefly the gradual revelation of the Messianic Hope.

3. What are the main features of the Synoptist delineation of Christ's person?

4. Indicate the place of miracle in our Lord's self-revelation.

5. How does St. Paul set forth the Divinity of our Lord?

6. Discuss the origin and meaning of the Logos-idea in the Fourth Gospel.

7. Describe the main heresies as to Christ's Person in the Second and Third Centuries.

8. State the leading ideas of the Theology of Justin Martyr.

9. Contrast briefly the theological methods of the Greek and Latin Apologists.

HONOURS.

Church History.

Ante-Nicene Period.

1. Trace the history of the Agape during the first three centuries.

2. Exhibit the evidence for St. Peter's residence at Rome.

3. Sketch the heretical teaching opposed in the Ignatian Epistles.

4. Briefly outline the argument of the Epistle to Diognetus.

5. Discuss the patristic use of the following words: *θεοσέβεια*, *δόγμα*, *εὐχαριστία*, *παντοκράτωρ*, *μάρτυς*, *ἄθεος*, *ἀθλητής*, *μυστήριον*.

6. Illustrate the Demonology of the Early Church.

7. Indicate the fundamental features of church life in the second century.

8. State what you know of the Apology of Aristides.

9. Give some account of the persecution at Lyons and Vienne, 177 A.D.

Translate and write short notes on:

(*a*) Igitur primum correpti fatebantur, inde indicio eorum multitndo ingens haud perinde in crimine incendii quam odio humani generis convicti sunt.

(*b*) *χριστιανοὶ κατέχονται μὲν ὡς ἐν φρουρᾷ τῷ κόσμῳ, αὐτοὶ δὲ συνέχουσι τὸν κόσμον.*

(*c*) *ποιῶν εἰς μυστήριον κοσμικὸν ἐκκλησίας.*

(*d*) *ἐν τοῖς τοῦ Μιθρᾶ μυστηρίοις.*

(*e*) *τῇ δὲ τοῦ Ἀδὰμ σωτηρίᾳ παρ' ἑαυτοῦ τὴν αἰτιολογίαν ποιησάμενος.*

(*f*) quarti evangeliorum iohannis ex decipolis.

(*g*) arsinoi autem seu valentini vel mitiadis nihil in totum recipemus qui etiam nouû psalmorum librum marcioni conscripse runt una cum basilide assianom catafry cum constitutorem.

(*h*) Oblationes pro defunctis, pro natalitiis, annua die facimus. Die dominico jejunium nefas ducimus vel geniculis adorare.

EXAMINATION FOR B.D.

Holy Scriptures—General Paper.

1. Describe the contents of the Book of Exodus.
2. Write a brief life of David.
3. Describe the teaching of the Book of Job.
4. Give the context of the following:

(*a*) "How should one chase a thousand
And two put ten thousand to flight?"

(*b*) "At the water-courses of Reuben
There were great searchings of heart."

(*c*) "Watchman, what of the night?"

(*d*) "I was no prophet, neither was I a prophet's son."

(*e*) "O that mine enemy had written a book!"

5. Give a brief account of the teaching of Amos or Hosea.

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6. What are the leading ideas of St. Matthew's Gospel?
7. Discuss the teaching of either (1) the Parable of the Unjust Steward, or (2) the Parable of the Talents.
8. Describe the martyrdom of St. Stephen, and state clearly the charges made against him.
9. Give the context of the following:—

(*a*) "Ye are the light of the world."

(*b*) "Blessed is he that shall eat bread in the kingdom of God."

(*c*) "Thou that abhorrest idols, dost thou rob temples?"

(*d*) "Jesus Christ is the same yesterday and to-day, yea, and forever."

(*e*) "For their works follow with them."

10. Describe the contents of any *one* of the followlng:—
I. Corinthians, Ephesians, I. John.

EXAMINATION FOR B.D.

Holy Scriptures—Special Paper.

1. Characterise Isaiah as a statesman and social reformer.

2. Give the dates of the following:—(*a*) Death of Uzziah, (*b*) Accession of Ahaz, (*c*) Fall of Samaria, (*d*) Accession of Sennacherib.

3. Give the substance of Isaiah's Messianic prophecies.

4. Explain the following:

(*a*) "At Michmash he layeth up his baggage;
They are gone over the pass."

(*b*) "As in the slaughter of Midian at the rock Oreb."

(*c*) "In that day shall the Lord shave with a razor that is hired."

(*d*) "For it is precept upon precept, precept upon precept; line upon line, line upon line."

(*e*) "The Lord shall rise up as in Mount Perazim."

5. What are the main elements in Isaiah's theology?

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6. Note the traces of an eye-witness in St. Mark's Gospel.

7. Classify the miracles recorded by St. Mark.

8. Write notes on the following:—

(*a*) "Did ye never read what David did when he had need and was an hungered?"

(*b*) "An eternal sin."

(*c*) "That by which thou mightest have been profited by me is Corban."

(*d*) "For every one shall be salted with fire."

(*e*) And they bring him unto the place Golgotha."

9. State the Sadducean objection to the doctrine of the resurrection of the dead and our Lord's reply.

10. What aspects of our Lord's ministry does St. Mark emphasise?

The Mackie Prize.

The Greek Apologists of the Second Century.

1. Name the works of these Apologists, with probable date of publication.

2. Indicate the significance of the Greek Apologetic for later theology.

3. Discuss the Logos-doctrine of the Apologists.

4. Briefly outline the argument of the Apology of Aristides.

5. How does Justin Martyr conceive of the relation between philosophy and Christianity ?

6. Summarise the main doctrines of the Apologists.

LEITCH MEMORIAL SCHOLARSHIP.

Butler's Analogy.

1. Sketch the system of unbelief with which Butler's Analogy deals.

2. State and illustrate the nature of the analogical argument. What is its value?

3. How does Butler define (1) natural government, (2) moral government?

4. How may we answer the objection "Some persons are even rewarded for wicked actions, others punished for virtuous actions?"

5. What is the meaning of the expression "a state of nature" as used by Butler?

6. What does Butler mean by "a state of probation?"

7. From what analogy does the present life appear to be such a state?

8. What are positive duties? Give an illustration. Is a positive command always binding?

LEITCH MEMORIAL SCHOLARSHIP.

Hebrew.

1. What data have we for settling authorship and age of Psalms? Discuss this, using as illustrations Psalms I., VIII., XIX.

2. Discuss the teaching of the Psalter from the standpoint of these twenty-five Psalms.

3. Translate Psalms II. 11, VIII. 1-3, XXV. 7-10, XIX. 1-3. Bring out the special force of the tenses, and comment upon any peculiar forms.

4. Analyse each word in Psalm XXV. 6, X. 12.

5. Translate:

כִּי עָשִׂיתָ מִשְׁפָּטִי וְדִינִי יָשַׁבְתָּ לְכִסֵּא שׁוֹפֵט צֶדֶק׃
כִּי לֹא אֵל חָפֵץ רֶשַׁע אָתָּה לֹא יְגֻרְךָ רָע׃

LEITCH MEMORIAL SCHOLARSHIP.

N.T. Criticism and Exegesis.

1. Discuss the question of the origin of the Christian Church at Rome.

2. What proofs does Paul appeal to in support of the view that the heathen have a law which is part of themselves?

3. Translate and explain Rom. 4:11-12. (1) What point does Paul here make against the upholders of Jewish privilege?

(2) What was the significance of the rite of circumcision?

4. Explain how Paul illustrates the relation of the believer to law by the case of husband and wife, Rom. 7:2-4.

5. What is the conception of heirship on which Paul basis his statement *κληρονόμοι μὲν θεοῦ*, Rom. 8:17?

6. Distinguish *τὸ μεν σῶμα νεκρὸν*, Rom. 8:10, and *τὸ θνητὸν σῶμα*, Rom. 8:11.

7. What was the aim of the writer of Hebrews, and how does he carry it out?

8. Translate Heb. 9:6-8.

(1) Parse *εἰσίασιν*, *στάσιν*.

(2) Distinguish *ἀποκαλύπτεσθαι* and *φανεροῦσθαι*.

(3) *ἀγνοημάτων*, what kind of sins does this term cover?

9. What are the points of superiority of the Christian to the Levitical priesthood?

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